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Informatics

An e-GOVERNANCE PUBLICATION FROM NATIONAL INFORMATICS CENTRE

Azadi Ka Amrit Mahotsav | स्वच्छ भारत एक कदम स्वच्छता की ओर | Digital India Power To Empower

- **Delhi** State
- **East Khasi Hills,** Meghalaya
- **Hamirpur,** Himachal Pradesh
- **Y.S.R (Kadapa),** Andhra Pradesh
- **Parivar Pahchan Patra**
- **eGranthalaya**
- **SVAMITVA**
- **OxyCare**
- **eTrans**
- **Server Security**
- **Secure Coding**

pg. 32

CISO CONNECT'22

SECURE GOVERNMENT

एनआईसी NIC

Informatics
VOL. 31 No. 2, October 2022

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Editorial

Communication is not the first term that comes to our mind when we think of scientific and technical organisations. People have a preconceived notion of solitary employees who prefer the company of their computers over that of other social beings. With the advent of the information society, which includes events, seminars, and conferences, this image of the solitary worker has deteriorated.

Communicating science is more than simply translating the jargon of science into simple language. Its complexity stems from the diversity and interconnectedness of several elements, including the goals for communication, the content being conveyed, the format in which it is presented, and the individuals and organisations involved. Also, people approach scientific communication from their vantage points, which are a combination of expectations, knowledge, beliefs, values and abilities that are shaped by social, political, and economic forces, as well as our concerns and influences. Therefore, it is a need of the hour that one should focus on improving his or her communication skills as clear communication does not only add to our success but the success of our team, projects and overall organisation.

Continuing the tradition of excellence, we are happy to present you with an array of articles celebrating the impact made by NIC on the lives of common citizens. We have covered the success stories of digitisation from the heart of India, **Delhi,** alongside three award-winning districts viz. **East Khasi Hills of Meghalaya, Hamirpur of Himachal Pradesh and Y.S.R. Kadapa District of Andhra Pradesh**. We have also covered four citizen-centric digital solutions developed by NIC viz. **Parivar Pehchan Patra, OxyCare, eGranthalaya,** and **SVAMITVA** under eGov Products and Services. In Appscape, we have covered a constellation of mobile apps - **Starbus, Rajasthan Ke Shiksha Mein Badhte Kadam, Swachh MP ODF+, Pehchan, Gang Canal, Drug Free Himachal,** and **Nammude Keralam** – which were recently designed and developed by NIC to meet the growing demands of citizens across the country. Then, our regular sections such as In The News, International eGov and Accolades bring you some interesting news.

Further, celebrating **National Cyber Security Awareness Month**, this issue features new initiatives taken by NIC for creating cyber-safe spaces for government and citizens alike.

Behind the scenes, we are continuously enhancing the publication by improving the quality, content, and design. Your feedback and suggestions are valued most. It would be much appreciated if you could take out some time to write to us with your opinion and suggestions which may be addressed to **editor.info@nic.in.**

Happy reading, and please take care, stay healthy and safe.

-Editor

Contents

Editorial 02

Contents 03

From the States
Delhi 04

Spotlight
Secretary's Visit 11

District Informatics
East Khasi Hills, Meghalaya 12
Hamirpur, HP 14
Y.S.R. District, AP 16

eGov Products & Services
Parivar Pehchan Patra 18
eGranthalaya 21
SVAMITVA 24
OxyCare 28

Infocus
eTrans 31
CISO 32

Technology Updates
Server Security 34
Secure Coding 36

Appscape 38
In the News 40
International eGov Update 44
Accolades 46

NCT **Delhi**

Strengthening Efficiency, Transparency & Effectiveness through ICT

Edited by **MOHAN DAS VISWAM**

Delhi is truly a cosmopolitan hub of India. People from diverse ethnic backgrounds and regions all co-exist in a harmonious manner. It offers a rich cultural experience and is known for its diversity, history, infrastructure, cuisine, education, research and innovation.

NIC NCT Delhi Centre started its operations in 1989. Since then, it has been providing an array of IT services to almost all the major departments of the State Government and has been proactively involved in entire process of planning, designing, development, deployment and implementation of major eGovernance projects for the State Government. It has spearheaded in developing an IT Culture in the State and its efforts have resulted in improved services with greater transparency, better efficiency and accountability.

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NIC NCT Delhi Centre is committed to providing consistent support to the Delhi State Government Departments in their endeavours for the development and operations of eGovernance solutions for the benefit of the citizens of Delhi. The State Centre has been proactively involved in up-keeping of essential services of Delhi State and District administration and played a key role in extending the technical expertise to the State Administration in ICT initiatives and implementation of various G2C, G2G and G2E projects.

ICT Initiatives in the State

Some of the major ICT initiatives implemented by the NIC NCT Delhi Centre are:

eDistrict Delhi

(https://edistrict.delhigovt.nic.in)

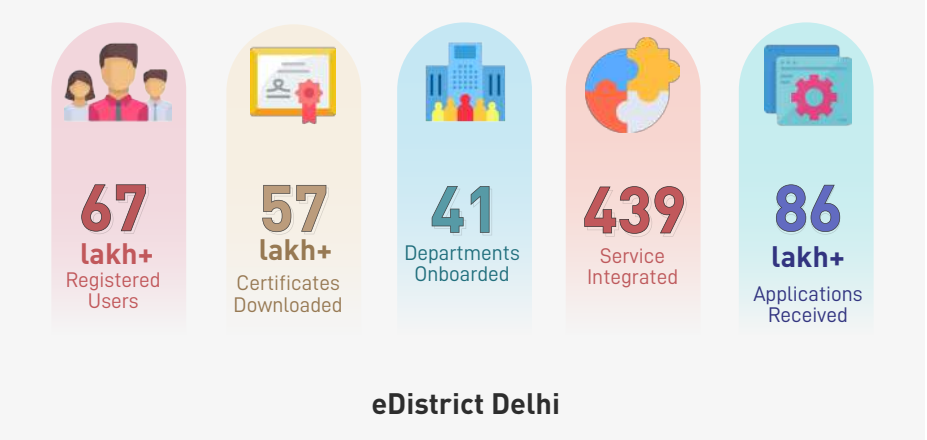
eDistrict Delhi is a prominent project of the Government of Delhi that provides end-to-end computerisation for citizen-centric services. Its objective is to provide these services in a transparent, efficient, and hassle-free manner.

Salient features

- Single Sign-On
- Aadhaar integration for online registration
- Issuance of Digitally Signed Certificates (DSCs)
- Online payment facility
- Integrated with Digital Locker
- Integrated with various departments for validation of supporting documents
- Integrated with electronic Service Level Agreement (eSLA) for timely delivery of services
- Facility for booking online appointments
- SMS and Email alerts at various stages
- Application status tracking
- Automation of each activity involved in Service Delivery
- Verification of the certificates

eDistrict Delhi has consolidated 439 services from 41 departments under a single roof. Over 67 lakh citizens have registered themselves on the portal to utilise its services. Over 86 lakh applications have been received; and 57 lakh DSCs have been generated through the portal.

It has significantly enhanced the service delivery and general operations of the state departments. Furthermore, it has remarkably improved the socio-economic conditions of the citizens. (Refer Fig. 1.1)



▲ Fig. 1.1: An overview of eDistrict Delhi

Door Step Delivery of Public Services

Door Step Delivery of Public Services facilitates the delivery of government services to the citizens of Delhi. Anyone can utilise this service by contacting a Mobile Sahayak (Doorstep Operator) through a Centralised Hotline 1073 or requesting the service online through web app. A Mobile Sahayak is an authorised Delhi Government representative who will visit applicant's home on requested date and time to assist with application, document uploading, and subsequent submission to the department via service portal. A citizen can avail of 40 services such as Birth / Death Certificate, Income Certificate, Caste Certificate, Labour Card, Ration Card (RC) and Driving License from user departments. More services are going to be added in subsequent phases.

DORIS

(https://doris.delhigovt.nic.in/)

Delhi Online Registration Information System (DORIS) provides a single-window system for timely and transparent property registrations. It also helps the department to monitor the revenue generated out of registration. Since 2002, it has been implemented in 22 Sub-Registrar Offices (SROs) within 11 revenue districts of Delhi. As of now, 2,63,661 documents have been registered and an amount worth Rs. 30,34,47,66,959 has been collected through the system.

Salient features

- Registration of Sale Deed, Will, GPA and SPA
- Centralisation data from 22 SROs
- Online appointment system
- Online availability of Property Records Data
- eSearch for checking property details
- Generation of special reports for auditing
- Stamp duty calculation
- Online departmental verification
- Deed writer for deed registration
- Online Deed verification by SROs
- SMS notification
- Customised monitoring modules

Any grievance related to property registration can be filed at the DORIS Grievance portal.

DLRC

(https://dlrc.delhi.gov.in/)

Delhi Land Record Computerisation (DLRC) deals with issuance of Records of Rights (RoRs) for Land Records Mutation. It has been implemented across all Tehsil Offices of Delhi. Its user group include Tehsildar, Kanungo, Patwari and Data Entry Operators. It has eliminated illegal manipulation of land records by making data public and assisted administration by automating the preparation of annual Khasra records.

ePDS

ePDS is a computerised supply chain-based Public Distribution System. It covers over 2000 Fair Price Shops (FPSs) in 70 circles with 17.8 million RC holders and 72.77 million beneficiaries. All RCs have been digitised and seeded with Aadhaar. Moreover, 15 lakh eRCs have been already issued. It facilitates nationwide portability of RCs through the One Nation One Ration Card. Further, it has also been enabled for Aadhaar-enabled PDS (AePDS) for automation of FPS operations.

Salient features

- Allocates essential commodities as per department policy
- Single integrated information system for commodities receipt
- Processes applications, approves and issues new RCs, modifies existing RCs, and generates various reports
- Allows recipients to download eRCs online

It has helped the State Government to identify fraudulent and duplicate applications resulting in saving government funds. (Refer Fig. 1.2)

LG Listening Post

(https://listeningpostdelhilg.in)

LG Listening Post is a web-based grievance redressal system developed for the Office of Lt. Governor of Delhi. Anyone can submit grievances through the portal; or via citizen reporter; or by tagging departmental accounts on Twitter. It also helps the Administration to measure its efficiency and effectiveness by providing feedback on its activities. As of now, over 11.1 lakh grievances have been received and over 92.2 thousand grievances have been addressed.

Salient features

- Define different levels of redressal officers
- Auto forwards grievances to the lowest level
- Define levels of escalation
- Lists departmental user, subject, locality and GRO / AGRO wise pendency
- Feedback-based reopening of grievances

The portal has helped departments discover grievance-prone areas that need greater attention for better service delivery.

PGMS

(https://pgms.delhi.gov.in)

Public Grievances Management System (PGMS) allows citizens to file grievances regarding any aspect of service delivery with public authorities. It is a single portal linked with all State Government Departments. On receiving the grievances, it forwards them to Nodal Officer of concerned department. The status of the grievance filed can be traced via a Unique Registration ID provided

▼ Fig. 1.2: An overview of ePDS Delhi

at the time of registration. The Reviewing Officer has a facility to reopen application if not satisfied with the action or agrees with the unsatisfactory feedback submitted by the citizen. It also facilitates Members of Legislative Assembly (MLAs) to monitor the grievances from their constituencies. Moreover, it helps the administration to identify the grievance-prone areas which require more attention for effective service delivery. As of now, it has received over 10 lakh grievances and out of which, 95.9 thousand grievances have been addressed.

Delhi Darpan

(https://dl.cmdashboard.nic.in)

DARPAN (Dashboard for Analytical Review of Projects Across Nation) transforms complex data into captivating visuals and aids in real time project monitoring. It improves data gathering by integrating multiple data sources onto a single, consolidated and easily accessible platform. It presents information in an objective and quantitative manner that enables administration to analyse key performance indicators, and identify problem areas that require attention.

CM-PMIS

(https://cmpmis.delhi.gov.in/)

Chief Minister's Project Monitoring Information System (CM-PMIS) is a monitoring dashboard used by the Hon'ble Chief Minister of Delhi to keep track of important state projects. These projects belong to various State government departments such as Public Works Department (PWD), Environment, Delhi Jal Board (DJB) and Irrigation and Flood Control (IFC). It generates multiple project reports, including milestone completion and deadline adherence.

Salient features

- Creation of new projects and subprojects
- Organise and define user groups
- Define project/user activities with timeline
- Entry of any directives by Hon'ble CM Delhi
- Action Taken Report entry for each activity by departments
- Provision for departments to revise timetables with justifications
- Ability to upload images of the construction work performed on site
- SMS / email alerts
- Dashboard and MIS for effective monitoring
- Project history alongside records of timeline revisions with rationale

In addition to CM Office, it is implemented across 12 departments and their subordinate offices across Delhi. Currently, it tracks 17 projects with a total of 219 distinct activities at various stages of their respective timelines.

▲ Fig. 1.3: eRevenue Court Case Portal Homepage

eRevenue Court Cases Portal

(https://erevenuecourt.delhi.gov.in/)

This portal helps citizens to file a petition and monitor proceedings in the Revenue Courts. In addition, it also computerizes the documentation during the case life cycle.

Salient features

- File a Revenue Court Case
- Generates a unique Case ID for each case
- Facilitates reply to court's deficiency memo
- Facilitates submission of counter affidavits, written replies, rejoinders and miscellaneous applications by parties involved
- Generates cause list
- Digitally signed judgments on decided cases
- Facilitates viewing of case history
- Publicly available updates on case proceedings
- eSummon / Hearing notice
- Online fee payment facility
- SMS / email alerts

A person can file a case under 20 Acts at 33 SDM Courts, 11 ADM Courts, 11 DM Courts, and the Financial Commissioner Court.

Currently, 28749 cases have been initiated. Over 950 cases have been decided and 3900 cases are scheduled to be heard within the next two to three months. (Refer Fig. 1.3)

CMAWS

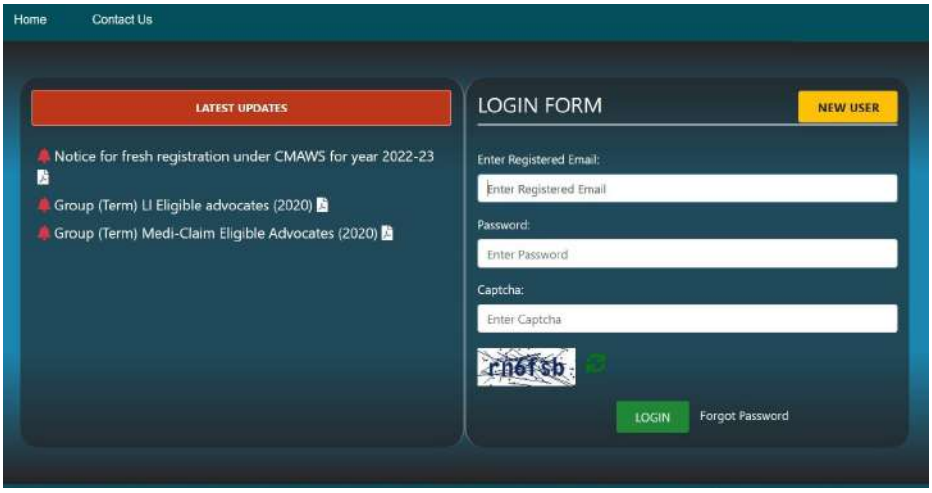
(https://cmaws.delhi.gov.in/)

Chief Minister Advocate Welfare Scheme (CMWAS) portal caters to State Government Welfare Schemes introduced for the advocates and their families registered with the Delhi Bar Council. Advocates can register online along with their family details to avail following welfare schemes

- Life Insurance Scheme
- Family Health Insurance Scheme

The portal also facilitates Delhi Bar Council to

▼ Fig. 1.4: CMAWS Delhi Homepage



verify the registered advocates for any duplicity.

As of now, a total of 10286 applications have been received. Out of which, 6150 advocates have also opted for Family Health Insurance Scheme. (Refer Fig. 1.4)

eSLA
(esla.delhi.gov.in)

eSLA aids in the implementation of "Delhi (Right of Citizen to Time Bound Delivery of Services), Act 2011" which mandates for timely delivery of citizen services by various State Government Departments.

Salient features

- API base integration with various departments / eDistrict portal
- Calculate pendency as per SLA and penalty amount thereof
- Monitor stage-wise disposal of applications
- Automate process flow
- Aids in tracking application with details of completed stages and concerned official
- Analytical Dashboard

It has been implemented across 48 departments. Over 565 services are notified under the eSLA Act and over 3.23 crore applications have been processed through the portal.

COVID-19 Delhi State Portal
(https://cfwcst.delhi.gov.in)

COVID-19 Delhi State Portal was developed for the Government of Delhi to monitor and manage COVID-19 data from a central location. The portal is utilised by various stakeholders such as State Surveillance Unit (SSU), District Surveillance Officers, Geospatial Delhi Limited (GSDL), Hospitals, Quarantine facilities, Diagnostic Labs, Revenue Districts, Dispensaries, Drug & Control Department, Drug CFAs, Drug Stockiest, Health & Family Welfare Department, Oxygen Manufacturers, Oxygen Suppliers / Re-fillers. The portal is also integrated with Delhi Corona mobile app to help citizens to get Hospital Bed Position information readily available. (Refer Fig. 1.5)

Salient features

- Patient module to manage the patients admitted at various hospitals
- Home Isolation module to monitor the status of patients under Home Isolation
- Death tracking module being updated daily by the hospitals
- Infrastructure management for managing infrastructure related data at various facilities
- Daily Health Bulletins
- Generation of MHA annexure with details of RT-PCR / Rapid Antigen testing, Containment Zones and ambulances
- Integrated with Oxygen Demand Aggregation System portal
- Drug demand and supply monitoring
- Dashboard showing various graphs for better data analysis

Apart from COVID-19, the portal is also used for monitoring Monkey-Pox and Dengue in Delhi.

ePayment
(https://epayment.delhigovt.nic.in)

It is a centralised system for paying fees and challans for various state government services. It is integrated with SBI ePayment gateway and provides two modes for online payment i.e. integration with other application and direct payments. It eliminates the need for a physical visit to departments. Over 110 schemes from 21 departments have on-boarded the portal and 19 lakh transactions have already been done.

Salient features

- Creates customised form for epayments
- Integration with the other apps to eliminate the need for one-to-one integration with SBI
- Advanced 128-bit encryption
- Do not require separate firewall rules for integrated apps
- Audit trails for each transaction
- Comprehensive MIS reports
- Track payment status
- Reconciliation of accounts facility
- Configurable challan-form for departmental schemes

eFilm Clearance Portal
(https://edistrictdttdc.delhigovt.nic.in)

eFilm clearance Portal is a Single Window Clearance System which provides permission for films shooting at various locations in Delhi by Delhi Tourism and Transport Development Corporation, Delhi Police and Delhi Traffic Police.

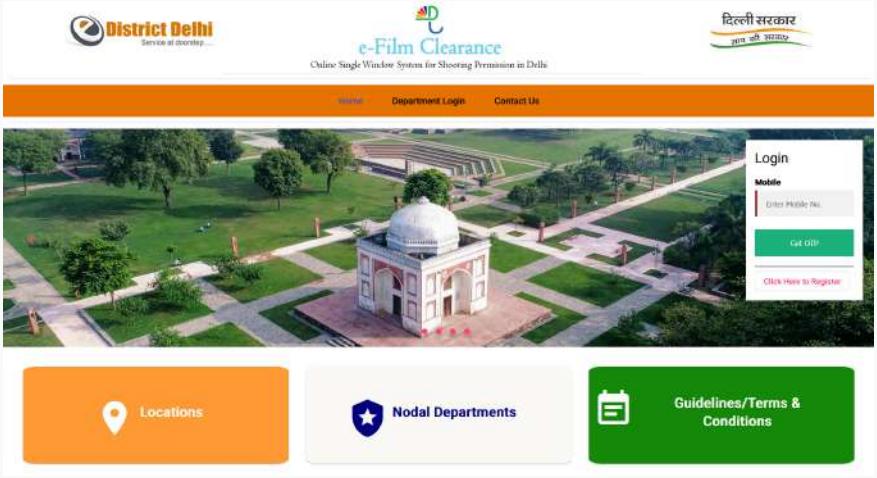
Salient features

- Common Application Form (CAF) to obtain permissions from all concerned authorities
- Auto forwards CAF to concerned departments for parallel processing
- Online fee payment facility
- Online approvals and permissions
- Applications monitoring by District Magistrate
- SMS / email alerts
- Facility to download permission letter

▼ Fig. 1.5: COVID-19 Delhi State Response Centre

NIC Delhi State Centre is an integral partner in Delhi Government's eGovernance initiatives as a system integrator and solution provider and plays a major role as an Advisor/Consultant for the creation of IT Infrastructure and for planning various IT enabled initiatives. The eDistrict Delhi Portal developed by NIC Delhi has integrated more than 400 services of various departments. The other major projects like DORIS (Property Registration System), Door Step Delivery, Revenue courts, e-PDS, IFMS Delhi, eSLA etc has been successfully implemented across the Delhi Government. I would like to appreciate the team of NIC Delhi for their dedication, perseverance; diligence and proactive attitude towards ICT work culture and extend my best wishes for their future endeavors.

Prince Dhawan, IAS
Special Secretary
Department of Information Technology, GNTCD



▲ Fig. 1.6: eFilm Clearance Homepage

As of now, over 500 locations in Delhi have been added for film shooting and 15 applications for film shooting have already been received in a short span since the launch of the portal. (Refer Fig. 1.6)

IFMS

Integrated Financial Management System (IFMS) provides a comprehensive accounting solution for account functionaries of Delhi Government. It streamlines salary preparation and disbursement process for timely payments to employee. It aids in monitoring budget estimates, expenditures and funds availability. It has been implemented by over 1,700 DDOs and 25 PAOs across Delhi. Its various components are:

Centralised Billing System (https://delpay.delhi.gov.in): Developed for DDO's and PAO's for generation of salary and other bills.

GPF Monitoring System (https://gpf.delhi.gov.in): GPF System is used by PAOs for entry of GPF subscriptions, refunds, withdrawals, interest calculation and generation of GPF Statements for the State Government employees.

De-Lekha (https://delekha.delhi.gov.in): An electronic Payment and Accounting Information System for consolidation of expenditure incurred across PAOs.

GepG (Government Electronic Payment Gateway): Provides secure electronic delivery of payment to employee.

Delhi State GST Reconciliation system (https://delsgst.delhi.gov.in): Reconciles Delhi SGST by integrating it with GSTN and RBI eKuber

IFMS Delhi Mobile App: Through this app, employees can download their salary slips and GPF statements alongside monthly contribution, withdrawal, and refund and interest calculation. (Refer Fig. 1.7)

Salient features

- Preparation of salary bill and other bills for all type of employees including regular / contractual / daily wager employees in a common format
- Issuance of digital signed GPF statements
- Integrated with PFMS for Central Sponsored Schemes and GEM for bill processing by DDO

The portal handles data for over 1 lakh State government employees. Over 6.5 lakh salary bills have been processed and 3.7 lakh digitally signed GPF statement have been issued.

It has reconciled SGST data for 1.19 crore transactions from GSTN and RBI eKuber system.

IFMS Delhi mobile has been onboarded by more than 55000 employees. The app has also been customised for Delhi Jal Board.

Single Window System for Department of Industry

Single Window System is a digital platform that assists investors to identify and apply for approvals based on their needs.

▼ Fig. 1.7: IFMS Delhi Mobile App

Salient features

- Single user registration to avoid multiple registrations
- All incentives and services are linked with Udyam Aakanksha, a self-certification based unique ID for all the industries in Delhi
- Provision of inspection and verification for various incentives and services

DVAT Portal

(https://dvat.gov.in/)

Delhi Value Added Tax (DVAT) portal is an integrated web portal developed under State Mission Mode Project for collection of Value Added Tax (VAT). VAT is an indirect tax levied upon services and commodities outside the purview of Goods & Services Tax (GST). The portal facilitates taxpayers from registration to assessment to VAT payment.

Salient features

- Eliminates hard copy submission
- Payment of taxes through ePayment
- Online refund transfer
- Online form submission
- Online return filing
- Identifies cases for audit / assessment

eForest

(https://treeremoval.delhigovt.nic.in)

eForest is a comprehensive web portal which facilitates applicants to submit online request for cutting, pruning, and replantation of trees to the State Forest Department.

Salient features

- Facilitates to download In Principle Approval Letter / Final Permission Letter
- Allows Online Fee Payment
- Integrated with MCD portal

Delhi Anaj Kharid Portal

(https://delhianajkharidportal.delhigovt.nic.in)

Delhi Anaj Kharid (State Kisan eProcurement) portal aims to implement the objectives of Delhi Food Grains Procurement Policy. It facilitates the online registration of farmers, digitisation of Mandis and Procurement Centres, and the direct and rapid transfer of minimum support price (MSP) to farmers in order to ensure uniformity, transparency, and prompt transfer of MSP, without any corruption or delay.

Tenders Delhi

(https://govtprocurement.delhi.gov.in)

Tenders Delhi (eProcurement) has streamlined the tendering processes for Government of Delhi resulting in uniform and transparent process.

Salient features

- Publishes all State Government Tenders above Rs. 2 lakh rupees

- Customised Vendor Enrolment module
- Exclusive Help Desks for Department Officials and Vendors

As of now, over 2.8 lakh tender worth 1,53,000 crore have been published by 200 agencies/ departments of State Government. Some of the major departments which floats tenders through the portal are PWD, DJB, NDMC, DSIIDC, Delhi District Courts, Revenue, IFC, Health & Family Welfare and all State Government Hospitals.

RTI Online

(https://rtionline.delhi.gov.in)

RTI Online was launched by the Government of Delhi in 2017 for easy dissemination of information asked under the RTI Act 2005. The system has been implemented across over 200 departments/ agencies of the State Government.

Salient features

- File RTI request and First Appeal online
- Track status of RTI applications
- Online fee payments
- SMS / email alerts

As of now, the portal has received over 2.5 lakh RTI requests and 29,000 First Appeals. Out of which, over 2.3 lakh RTI requests and 23,000 First Appeals have been addressed.

eCounselling

eCounselling provides end-to-end technical support and services towards a transparent admission process in academic Institutions across the state. In Delhi, following counsel boards have been automated by using eCounselling software.

- JAC (Joint Admission Counselling) comprising of NSUT, DTU, IGDTUW, DSEU & IIIT Delhi
- GGSIP University
- ITI
- SCERT

It has brought complete transparency in the admission process. As of now, it handles counselling of over 120 courses across various counselling boards of Delhi.

Salient features

- Registration and choice filling by candidates
- Online fee payment
- Provision to create the seat matrix
- Implementation of the reservation rules
- Verification of the documents
- Pre-allotment validation of candidate's data
- Seat allocation based on candidate preference, reservation, allotment rules and seat matrix
- Conversion of seats from one category to another category
- Post-allotment verification of data sets to eliminate any violation
- Publishing of the allotment result
- Provision to admission / withdrawal of the candidate
- Provision for cancellation of the seat
- Spot round allotment provisions
- Generation of the exception reports
- Comprehensive MIS and informative portal for the candidates

DSSSB Online

(https://dsssbonline.nic.in/)

DSSSB Online is an online application and registration system developed for Delhi Subordinate Services Selection Board (DSSSB) to receive and manage applications for various vacancies advertised by the board online.

Salient features

- Ensures Unique Registration by producing registration key using the candidate's date of birth, matriculation exam roll number, and year of passing the exam
- Automated recruitment process from calling applications from eligible candidates, issuing exam notification, issuing admit cards, conducting exam, marking attendance, uploading result, to calling eDossiers
- Online fee payment facility
- SMS / email alerts

Delhi Labour Welfare Board

(https://dlabourwelfareboard.delhi.gov.in/)

Delhi Labour Welfare Board portal is a comprehensive web portal designed for the registration of employer's under the Delhi Labour Welfare Board. The portal aids in the implementation of Delhi Labour Welfare Fund Act, 1997, which is modeled after "Bombay Labour Welfare Fund Act, 1953".

Under this act, DLW Board accepts contribution of employers as well as employees at the @2.25 paisa and 0.75 paisa respectively for the welfare of the labour.

Salient features

- Online registration of employer establishment
- Amendment of the employer information including the details of number of employees
- Online submission of employer / employees contribution with detailed inputs from the employer
- Online submission of unpaid fine with details of employee by the employer
- Online closure of employer
- Regular updation of employee details by employer registered under Delhi Labour Welfare Fund Act

Within two months of launch, the portal has seen 1873 employer registration with a total of Rs. 505630 deposited in the state Government account.

Delhi Central Inspection System

(https://cisdel.delhi.gov.in/)

Delhi Central Inspection System (CIS) addresses complaints about ambiguity, overlapping mandates and a general lack of consensus between the government inspection authorities. It aims to simplify business regulations and bring in transparency and accountability in inspections. It replaces manual scheduling of inspections with a synchronised plan for various agencies. As of now, five departments have already been onboarded onto the portal namely Labour, Factory, Boiler, DPCC and Weights & Measure.

Salient features

- Random selection of Inspectors against establishments for scheduled inspections
- Provision for department based inspection and Joint Inspection (Labour and Factory)
- Provision to raise a complaint against a unit and forwarding the same to the department concerned for inspection
- Department-wise inspection completion / pendency charts

As of now, over 25000 establishment have

▼ Fig. 1.8: Delhi Central Inspection System Informatics Page

Infrastructure Support & Network Services

Internet Bandwidth	District Connectivity	Wi-Fi Service (Delhi Secretariat)	Email Service	Broadband Service
10 Gbps connectivity to State (1 redundant)	11 districts are connected via 34 Mbps leased lines	2000+ devices configured	31,800+ email accounts created and new accounts added regularly	4000+ secure boradband accounts configured

▲ Table 1.1: An overview of Infrastructure Support & Network Services by NIC NCT Delhi Centre

registered onto the portal for Inspection by Labour and Factory Department. In future, other departments are also in the process of scheduling inspection through this system. (Refer Fig. 1.8)

Delhi Shops Exemption App

(https://dlabourwelfareboard.delhi.gov.in/shopexemption/)

This app is designed to facilitate the Delhi Labour Welfare Board to implement the objectives of Delhi Shops and Establishments Act, 1954. The Act aims to provide relief to people working in unorganised sector, especially employed in shops and other similar establishments. It regulates working hours, payment of wages, leave, holidays, terms of service and other conditions in these establishments. The app allows for online submission for exemption under the provisions of this Act. It was developed on a priority basis as per the directives of Hon'ble Lt. Governor, Delhi.

Salient features

- Allows employer registration and detail modification
- Tracks application status
- Forwards applications for Inspection / Approval / Rejection with an option to upload Gazette Notification after approval from the Hon'ble Lt. Governor Delhi
- Uploads new notifications

Other Key Initiatives

Infrastructure Support and Network Services

NIC Delhi integrated NICNET and Delhi State Wide Area Network for better data sharing and VC services. (Refer Table 1.1)

Some of the highlights of the service are:

- Configured 11,000 computer nodes
- Operationalised 230 leased lines and ethernet links at 178 locations of Government of Delhi
- Over 31,800 email accounts created till date
- Over 4,000 secure broadband accounts have been configured
- Enabled Central Wi-Fi access to mobile devices in Delhi Secretariat. Over 2000 devices have been configured for Wi-Fi services
- Setup 14 Video Conferencing (VC) centres/sites

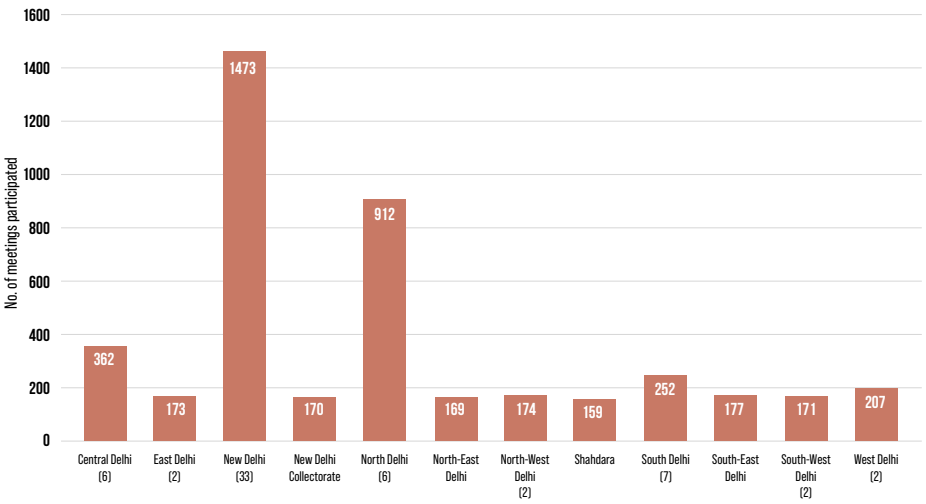
VC Services

VC has gained popularity among Delhi government officials as it saves time and resources. Therefore, to meet the demand, VC Division has laid out dedicated infrastructure at the major offices of Chief Minister, Chief Secretary, and other higher officials. VC studios are also set up at State and District Headquarters.

In 2022 alone, a total of 2434 VC sessions has been conducted from 1st January 2022 to 31st August 2022. The facility has been extensively used by the State officials for reviewing departmental/ inter-departmental schemes and programmes. (Refer Fig. 1.9)

Also, exclusive VC infrastructure has been laid down for Hon'ble Prime Minister of India, Union Ministers, Lt. Governor, Cabinet Secretary and other senior officials.

▼ Fig. 1.9: VC sessions conducted between 1st January and 31st August 2022



iRAD

Integrated Road Accident Database (iRAD) is an initiative of the Ministry of Road Transport and Highways (MoRTH), Government of India and funded by World Bank with an objective to improve road safety in the country. It facilitates collection and analysis of road accident data; installation of required cloud infrastructure / configuration and maintenance of physical servers; training of users / stakeholders; and establishment of a helpdesk.

Important Events Organised

VC services were provided during the distribution of Sneh Patra by the Hon'ble Prime Minister Shri Narendra Modi to the beneficiaries of PM-CARES scheme.

Accolades

- Gems of Digital Delhi for NFS (ePDS), e-Tenders, eSLA projects
- Technology Sabha Award '20 for eDistrict Delhi
- Bronze Award for IFMS Delhi Mobile app in State Mobile App contest conducted by NIC

Way Forward

With its dedicated teams at State / District Centres, NIC NCT Delhi Centre stands committed to providing a valuable impact on digital governance. It is working toward the rollout of several central projects in the State, such as eOffice, eHRMS, SPARROW, eAbkari, eCabinet, Tejas, and Single Window System for the Department of Industry. Moreover, for the betterment of citizens' lives, it is engaged in development of micro-services based apps using new and cutting-edge technologies.

Contact for more details

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Visit of Shri Alkesh Kumar Sharma, IAS, Secretary (MeitY) to NIC

The maiden visit of Shri Alkesh Kumar Sharma, IAS, to NIC Headquarters on July 29, 2022, after taking charge as the new Secretary to the Ministry of Electronics & Information Technology (MeitY), marked a special event in the timeline of NIC.

On this occasion, the Secretary presided over a conference on the Next-Gen Digital Government Solutions developed by NIC. This conference was also graced by Dr. Rajendra Kumar, Addl. Secretary, Shri Bhuvnesh Kumar, Joint Secretary, and Shri Sushil Pal, Joint Secretary, MietY.

Shri Rajesh Gera, Director General, NIC, opened the conference with a presentation by outlining the vision and initiatives of NIC for the facilitation of various eGovernance activities of the government.

NIC State Officials who joined the conference from their respective State Centres through video conferencing, also briefed the Secretary about the major State eGovernance projects undertaken by NIC to improve the lives of citizens.

After the presentation, the Secretary praised NIC for its role in ensuring the crucial last-mile delivery of government services. He further added, "the understated role of NIC in quietly and effectively building the digital infrastructure of our country must be appreciated as it is due to the efforts of NIC that we are now able to quickly launch eServices that benefit the common citizen immensely."

The Secretary's visit was an enriching experience for NIC officials and motivated them to put their best foot forward.

East Khasi Hills, Meghalaya

Taking ICT to the Grassroot

Edited by **DIBAKAR RAY**

NIC East Khasi Hills District Centre was established way back in 1989 to provide technical and infrastructural support for the implementation of various eGovernance initiatives in the District, thereby providing for better services to citizens.

ICT Initiatives in the District

Being at the State's Capital and Commercial Centre, Shillong, NIC East Khasi Hills District Centre is engaged in a variety of activities. It should be noted that the majority of apps are initially piloted here before a complete state-wide rollout. The following is an overview of some of these apps:

MRSSA App

The Government of Meghalaya enacted the Meghalaya Resident Safety & Security Act (MRSSA) 2016 with the purpose of safeguarding and enhancing the security of citizens of the state by conducting a thorough inspection of all tenants residing in the state. Its primary objective was to monitor and enable control mechanisms to check the influx of illegal migrants. The State Government, in partnership with NIC, has designed a web app that will allow citizens (landlords / tenants) to register themselves under MRSSA Act, subject to verification by the local authorities.

NIC East Khasi Hills District Centre has established itself as a state-of-the-art ICT system provider to various departments and stakeholders under the District Administration for enabling transparent G2G and G2C services by utilising emerging technologies for the benefit of different socio-economic sectors.

Land Registration / NGDRS

The Meghalaya Land Registration app was started as a pilot project in the District. Since then, it has made the whole system more transparent and efficient. A person can now query the amount of fees and stamp duty for the registration of the property in advance. Thereafter, the applicant prepares the deed on non-judicial stamp paper based on the pre-calculated value. A receipt / token bearing a Temporary Registration Number is issued. When all documents are in order, Temporary Registration Number is converted to a Permanent Registration Number.

Land Records Computerisation

It is a web-based system developed by NIC for the Government of Meghalaya. As of now, only Mutation Module for leasing land has been deployed in the State. The DC Office maintains land records while spatial data is taken care of by the Department of Land Records. Inclusion of users from the Survey Department as workflow players ensures a seamless integration between the DC Office and the Department of Land Records.

Public Distribution System

NIC District Centre has helped the Administration in discharging the responsibility of Public Distribution by ensuring the following:

- Digitised ration cards through Ration Card Management System (RCMS) using the Socio Economic Caste Census (SECC) 2011 data
- Implemented online allocation module using Food Essential Commodities Assurance Security Target (FEAST) app
- Automated Fair Price Shops (FPS) using electronic Point of Sale (ePoS) devices
- Created One Nation One Ration Cards for ration card holders to get their supply of food grains from any FPS in the country
- Operationalised toll free helpline number 1967 and Public Grievance Redressal System for public grievances

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▲ Fig. 3.1: Shri Conrad K. Sangma, Hon'ble CM Meghalaya, launching MRSSA portal at Shillong

eDistrict

eDistrict provides an end-to-end computerisation of citizen-centric services offered by the DC Office. Citizens can avail these services by simply utilising the web app or visiting the local community service centre or public facilitation centre at the DC Office.

DSC App

Direct Selection Committee (DSC) App is a comprehensive Online Recruitment Application System developed for local job aspirants to apply for various government jobs online as notified by the District Administration. Besides registration, it facilitates the payment of recruitment examination fees using the eGRAS system. In addition, a help desk system is also set up to facilitate candidates on various recruitment-related issues. The app has reduced the footfall of the aspirants in the DC Office to a very large extent.

General Elections

NIC District Centre provides extensive support to the Election Commission and the District Administration towards the conduct of General / State / Local Council elections during all the stages of the election process. It plays a vital role in the capacity building of all ICT-enabled applications as a master trainer, alongside handholding the user data on various web-based and mobile-based applications. Some of the activities performed by the District Centre are set up of hardware and LAN services at Polling Stations and Counting Halls, SMS monitoring, and Cyber Security.

District Website

(https://eastkhasihills.gov.in)

NIC District Centre with inputs from the District Administration has designed and developed an official website for dissemination of information on public utilities, citizen services, administrative structure, and recruitments across the district. The website is regularly updated and built on the S3WaaS platform.

COVID-19 Support

NIC District Centre played a vital role in the fight against the COVID-19 pandemic. From establishing a Data Collection Centre to Information Dissemination, following are some of the services provided by the Centre:

- **Establishment of Data Collection Centre:** A Data Collection Centre was set up in the DC Office to compile details of incoming and outgoing travellers for monitoring purposes.
- **Issuance of eCurfew Pass:** An eCurfew Pass system was setup to facilitate passes to citizens facing medical emergencies during lockdowns. The Centre also provided support to the District Administration in delivering functional hardware for issuing these passes.
- **VC Service Support:** The District Centre provided full support to conduct VC sessions between the DC Office and various State Departments and made sure that VC services ran uninterrupted.
- **Updation of Website:** A section on the official district website was created for the regular dissemination of authentic COVID-19 related information.

▼ Fig. 3.2: Shri Conrad K. Sangma, Hon'ble CM Meghalaya, launching Meghalaya Land Registration app

The NIC East Khasi Hills District Unit has played a commendable role in the implementation of various eGovernance projects and in providing Technical Support to different ICT Initiatives to the District Administration. It has played a crucial role in bringing governance closer to the people by ensuring prompt, effective and timely delivery of public services. The various initiatives have also been pivotal in streamlining work-flow and in bringing success in eGovernance in the district as a whole. I wish the NIC the very best in their future endeavours.

Isawanda Laloo, IAS
District Magistrate & Deputy Commissioner
East Khasi Hills

- **Training on various apps:** Training on Rapid Antibody Test of India (RATI), RT-PCR Mobile App, and Aarogya Setu were imparted to various government personnel.

Other Initiatives

Following ICT projects are also monitored and supported by the NIC District Centre

- Scheme Management Information System
- Excise Permits Issuance Portal
- National Database of Arm Licenses (NDAL)
- Online RTI Application Portal
- eProsecution
- Online Citizenship

Way Forward

NIC East Khasi Hills aims to introduce and implement innovative eGovernance solutions for increased output and efficiency in order to provide better and more effective service delivery to the citizens of the district.

Contact for more details

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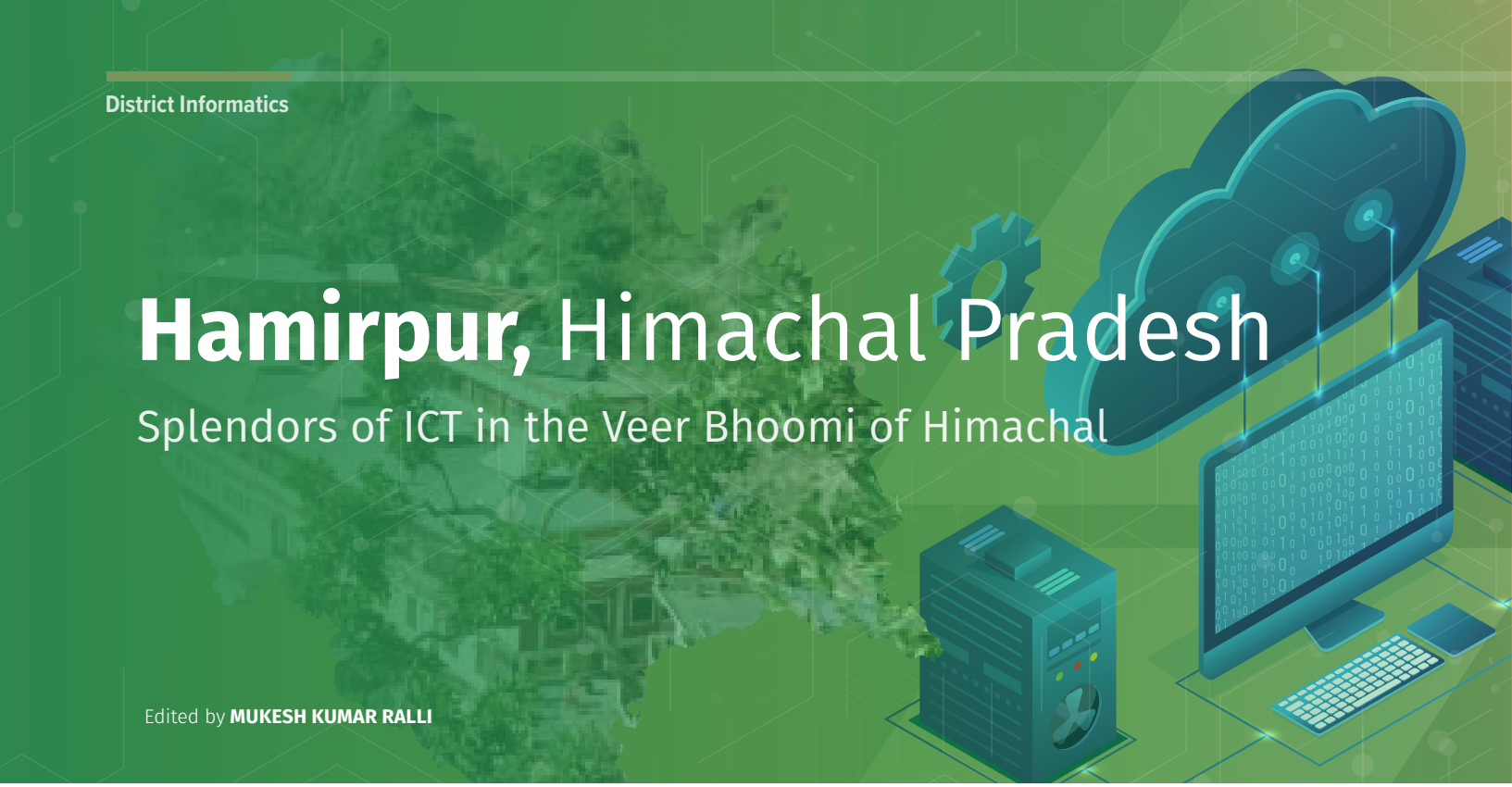

Hamirpur, Himachal Pradesh

Splendors of ICT in the Veer Bhoomi of Himachal

Edited by **MUKESH KUMAR RALLI**

Since its establishment in 1989, NIC Hamirpur District Centre has played a crucial role in the design and development of ICT programmes. It has significantly contributed to the strengthening and growth of an IT culture in the Himalayan District.

ICT Initiatives in the District

Him Red Cross Mobile App

The Red Cross is a voluntary organisation that provides emergency relief and promotes care for vulnerable people and communities. Its mission is to inspire, encourage, and initiate humanitarian operations to reduce human suffering.

Under the District Governance Mobile Challenge, a mobile app was built to automate the numerous services provided by the District Red Cross Society. Its primary objective is to provide accurate, up-to-date information and to encourage the public to donate generously so that those in need might be assisted. The app was launched by Shri Jai Ram Thakur, Hon'ble CM Himachal Pradesh during a district level event. (Refer Fig. 4.1)

NIC Hamirpur was first to migrate the District Website onto the S3WaaS framework and supported other district centres of Himachal Pradesh, Jammu & Kashmir, Ladakh and the North-East in replicating the process. It has developed a mobile app for the District Red Cross Society and always remained at the core of all ICT initiatives taken up by the District Administration.

Salient features

- Facilitates applying for lifetime membership at the District Red Cross Society
- Updates information on Red Cross services
- in-app call facility to Nodal Officers
- Lists Nodal officers who can accept donations
- Lists nearby pathological labs, available tests and their rates
- Notifies about upcoming events such as Medical Camps, Blood Camps, and Red Cross Fairs

Hamirpur District Website

(https://hphamirpur.nic.in/)

The Hamirpur District Website is a bilingual, GIGW-compliant website built on the S3WaaS architecture that serves as a reliable source of data about the history, demography, culture, tourism, citizen services, tenders, events, and accommodation in the district.

Election

The District Centre acts as a technical arm for the District Election Officer (DEO) in carrying out election activities. (Refer Fig. 4.2) NIC officers are assigned multiple roles in advance and are responsible for laying out ICT infrastructure for the conduct of elections in a smooth, effective and transparent manner. The key activities performed by the District Centre for Himachal Pradesh Vidhan Sabha 2022 elections are:

- Electronic Voting Machines management, which includes 2-stage randomisation on the web app by ECI to eliminate any source of corruption
- Configuring ENCORE (ENabling Communications on Real-time Environment) for facilitating candidates to file their nominations
- Webcasts poll stations activities on polling day to concerned departments for monitoring
- Establishing Control Rooms at the Counting Centres as per the directives of ECI Observers, DEO and other concerned officials
- Implementing ETPBS (Electronically

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▲ Fig. 4.1: Shri Jai Ram Thakur, Hon'ble CM Himachal Pradesh, launching Him Red Cross Mobile App

Transmitted Postal Ballot System) for vote counting, result preparation and result posting

Other Key Initiatives

COVID-19 Response

In a short amount of time, COVID-19 has drastically altered people's lives, either directly or indirectly, and caused misery across the country. The effects continue to be felt by the population even after several months. NIC Hamirpur played an extremely important role in managing COVID-19 related activities during lockdowns. The list that follows includes some of the District Center's most important tasks.

- Setting and managing District Control Rooms
- Provided Video Conferencing (VC), email and internet services on a 24 x 7 basis
- Regular updation on District Website and Social Media for the dissemination of authentic information
- Developed and designed Infographics for quick and easy understanding of appropriate COVID behaviour
- Provided technical support for Aarogya Setu App, COVID-19 CC Portal, RTPCR App, PM OxyCare App and RATI App
- Facilitated the Issuance of COVID curfew passes and permissions for essential workers or to general public in case of a medical emergency

Sugam Kendra

Sugam Kendras are eGovernance service facilitation centres that offer over 70 citizen services under a single roof. These centres have been established at the district, subdistrict, tehsil, and subtehsil levels. Key services being provided here are

- Services related to vehicle registrations and other licenses
- Services related to driver / conductor licenses
- Arms License and related services
- Land Deeds, Nakal-RoR, eStamp, PM-KISAN, Aadhaar and other certificates

Project Implementation

NIC Hamirpur played a significant role in the implementation of various ICT projects for both the State and Central Government in order to leverage the influence of eGovernance in the District which resulted in the better delivery of citizen services. Some of the major ICT projects implemented by the District Centre are NGDRS, MEGH Services (Integrated Revenue Management), HimKosh (IFMS), Manav Sampada, eSamadhan, CPGRAMS, NSP, eRozgar, eKalyan, IDSP / RCH, eCourt, ePanchayat, NDAL-ALIS, IVFRT, iRAD, eHimApurti, eProcurement, AEBAS, Jeevan Pramaan, eOffice, Himpragati, MGNREGA, Anganwari Centre MIS, DEAS (Double Entry Accounting System) and ERMS (Electoral Roll Management System).

Important Events Organised

- Conducted VC session with the Hon'ble President of India on National Teacher's Day Awards Ceremony

▼ Fig. 4.2: District Election Office section for the Vidhan Sabha General Elections - 2022 in district website

The entire team of NIC Hamirpur has been working day and night in making eGovernance initiatives successful in the district. Their role has been especially commendable during the COVID-19 Pandemic. NIC Hamirpur was the first in the State to develop a dedicated section for District Election Office for the upcoming Vidhan Sabha Elections.

I wish the entire team of NIC Hamirpur, all the very best and pray that they go from strength to strength in contributing to the task of transparent and effective public service delivery to the citizens of the district.

Debsweta Banik, IAS
Deputy Commissioner, Hamirpur

- Conducted VC sessions between the Hon'ble Prime Minister of India and beneficiaries of COVID Vaccination, Ayushman Bharat and PM-CARES
- Conducted VC session between the Hon'ble Chief Minister of Himachal Pradesh and the beneficiaries of Ujala, Ujjwala, Himcare, and Nari Ko Naman Scheme
- Organised several VCs during visits of important government officials

Accolades

- Corona Warrior Award – 2020
- PC Quest Best IT Implementations Award 2016 for Hot Dak Tracking System
- Skoch Order of Merit 2015 for Hot Dak Tracking System

Way Forward

Pursuing ICT technological developments, NIC Hamirpur is committed to provide the District Administration and the public at large with the best ICT services by leveraging the potential of the most recent technologies. The ambit of mGovernance will eventually include more services. In the subsequent initiatives, cutting-edge technologies like artificial intelligence and data analytics are planned to be used.

Contact for more details

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Y.S.R. District (Kadapa), Andhra Pradesh

Realizing the dreams of Digital India

Edited by **REUBAN K.**

Earlier known as Kadapa, Y.S.R. District is said to be the heart of Rayalaseema. It is the social, cultural, and economic epicentre of the region and is now, leading the region in terms of science, innovation and technology.

NIC Y.S.R. District Centre has played a huge part in this technological movement and supported the District Administration to pin the name of the district on the map of Digital Economy 2.0.

ICT Initiatives in the District

The journey of NIC Y.S.R. District Centre started way back in 1988. Since then, it has been supporting the District Administration and other Government Departments in the district to implement ICT programmes for both Central and State Governments. It is equipped with 100 Mbps Leased Line connectivity with backup connectivity from RailTel Network. The bandwidth is shared with the Andhra Pradesh State Wide Area Network (AP-SWAN) of the Government of Andhra Pradesh, to support the Video Conferencing facility up to the Mandal (sub-divisional) level.

NIC Y.S.R. District Centre is playing a pivotal role in providing complete ICT Support to the District Administration right from the date of its inception. Through the technical support to the District Administration and all the departments in the District, it has completely changed the face of the backward District to get highlighted in the Digital Road map not only in the State of Andhra Pradesh but also at National Level.

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Some of the major apps and programs implemented by the NIC Y.S.R. District Centre are:

Spandana

Spandana is a one-stop public grievance redressal platform by the Government of Andhra Pradesh for the citizens of Andhra Pradesh. A grievance is a formal complaint on any issue regarding the delivery of services by the Government. Any person can raise his / her grievance through various methods, viz., Gram Ward Sachivalayam, 1902 Call Centre, Spandana mobile and web app, and Collectorate grievance day (Spandana Mondays). Once a grievance is registered, the person can track the status through Your SPANDANA Request Number (Y.S.R. #).

Spandana has a workflow mechanism up to the Gram Panchayat level and has various features such as a service level agreement (SLA) timeline, escalation matrix, performance metrics, and feedback forms. For the success of Spandana, NIC Y.S.R. District Centre has fully extended its complete support to the District Administration in organising training sessions, user mapping and liaison with the State Project Management Unit.

Kadapa District Website

As part of the Digital India initiative, NIC District Centre has completely redesigned the Y.S.R. District website with inputs from the District Administration. The new district website is built on the S3waaS Framework and is regularly updated for the dissemination of important information by the District and State administration. The website sheds light on the history, culture, society, demography, citizen services and administrative set-up of the district.

eOffice

NIC Y.S.R. District Centre is responsible for implementing eOffice across various State and Central Government offices and departments in the district. As of now, the District Centre has implemented eOffice across 147 Offices. Since the implementation, these offices have cumulatively

▲ Fig. 5.1: eOffice training session conducted by DIO Y.S.R. District Dr. T.R. Vijaya Kumar

▼ Fig. 5.2: iRAD training session conducted at Y.S.R. District Police Headquarter

generated 390622 eFiles, making the district third in the state to make use of the platform. The concentrated efforts by NIC through 253 training programs have helped in penetrating up to the Mandal level.

eHospital

eHospital is an open source health management information system (HMIS) by NIC. It is easily configurable and highly customizable with multi-tenancy support. The system was rolled out in the district around February 2022 and since then, it has been implemented in major hospital and community healthcare centres across the district. Some of the major district hospitals which have been onboarded on eHospital are Government General Hospital, Kadapa, District Hospital, Proddatur, Area Hospital, Pulivendula, and Area Hospital, Jammalamadugu. The District Centre has extended its technical support right from onboarding the hospital, master data entry, to configure the modules. So far, 63,818 OPD registrations, 9792 IP registrations, 4084 Causality registrations, 2773 Laboratory registrations and 246 EHRs have been generated on the platform since its launch.

iRAD

Since the launch of the iRAD (Integrated Road Accident Database) project, NIC Y.S.R. District Centre has been conducting extensive training programmes for all user departments in the district. It is providing live demonstrations of web and mobile apps to capture vital information. The District Centre is also participating in Monthly Road Safety Meetings and giving useful information / suggestions to the Chairman & District Collector. As of now, 511 accidents have been recorded on the app. Out of which, 232 were fatal in nature.

Other Key Initiatives

Magnificent Kadapa

NIC Y.S.R. District Centre has developed an Android application to promote tourism in the district. The app serves as a pocket guide to learn about various tourist spots in the Y.S.R. district. The app also provides information on how to reach the spot, brief historic relevance of the place and proper coordinates of the places.

Civil Works Monitoring System

Civil Works Monitoring System (CWMS) is an integrated solution for monitoring civil works sanctioned under MPLADS and other similar funds. It has been implemented in various Engineering Departments. The basic data of each work is entered by the Planning Department in a web app. The implementing agency also records the progress of the works in an android App by capturing photographs of the work spots including their geographical coordinates. After proper inspection of the spot, payments are released to the implementing agencies.

R&R MIS App

The R&R MIS (Rehabilitation and Resettlement Management Information System) app is designed and developed by the NIC Andhra Pradesh State Centre team in coordination with the NIC Y.S.R. District Centre. It is a web-based app coupled with an android-based mobile app and a biometric device. It has information related to displaced persons / families under the Gandikota project. It facilitates a mechanism to validate the eligibility of the person to claim the rehabilitation compensation package. The compensation amount is then given to the claimant through a demand draft. The approval of which is subjected to biometric verification.

▼ Fig. 5.3: Interaction between NIC team and Hospital Staff on eHospital suite at General Hospital, Kadapa

> It gives me immense pleasure to put on record the excellent ICT Support services being extended by NIC Y.S.R. District Centre to the District Administration. Y.S.R. District is able to implement many mission mode projects under Digital India initiatives and many State Flagship Programs are being implemented successfully in the District.
>
> Appreciating the commendable contributions NIC is making in taking forward the Digital India Program and bridging the digital divide with the aim to benefit the citizens of this country.

V. Vijaya Rama Raju, IAS
Collector & District Magistrate
Y.S.R. District

Accolades

In recognition of ICT support services extended by NIC Y.S.R. District Centre, the officials from the District Centre have been awarded several certificates and medallions during state-level events.

Way Forward

NIC Y.S.R. District Centre strives to promote ICT-enabled services such as G2G, G2E, and most importantly, G2C to various stakeholders in order to bridge the digital divide. In a self-declared manifesto, it has pledged to transform the digital space of the district by providing citizens with a better, more effective service delivery experience.

Contact for more details

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Parivar Pehchan Patra

Mera Parivar Meri Pehchan

Edited by **MUKESH KUMAR RALLI**

Most government services and initiatives are provided to the populace in accordance with metrics related to their families, communities, and economies. There is no other method to determine how many family members are receiving benefits and how many are being left out if different departments extend benefits to different individuals. Parivar Pechan Patra was designed with this fundamental idea in mind. All families and households residing in the state of Haryana are included in a dynamic database that was developed on the Hon'ble Chief Minister's behest.

The Family Identity Data Repository #(FIDR) database assigns each family a personalized eight-digit alphanumeric number called a PPP. As of September 20, 2022, 2.81 crore families containing 71.26 lakh individuals had enrolled with FIDR. Each person's demographic and socioeconomic details, including Name, Father's Name, Mother's Name, Date of Birth (DoB), Caste, Divyangta Status, Address, Annual Income, and Individual Land Holdings, is captured while creating the FIDR database. (Refer Fig. 6.1 & 6.2)

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Parivar Pehchan Patra is an 8-digit unique alphanumeric number assigned to each family / household across the state of Haryana. Presently, 71.26 lakh families consisting of 2.81 crore members have been enrolled in the Family Identity Data Repository. The demographic details along with socio-economic details such as Name, Head of the Family, Parent's Name, Date of Birth, Caste, Divyangta Status, Address, Annual Income, Land holdings are taken for each individual.

Overview

PPP helps in compiling a reliable and verifiable data set of each and every family or home in the State. It stores the family's basic information, provided with the family's consent, in a digital format that is linked to the records of births, deaths, and marriages to ensure that data is updated automatically when such events occur. In order to guarantee consistency and reliability, it is also linked to existing data from independent schemes, enabling the automatic selection of beneficiaries for different programs. Therefore, after creating a PPP, families are no longer required to complete paperwork and make separate scheme applications.

Implementation Strategy

Consent-based registrations for PPP started in August 2019, but the reception was underwhelming. It was then decided to implement a programme that would reward people for enrolling.

Mukhyamantri Parivar Samriddhi Yojana scheme was introduced in January 2020 and guarantees each registered household a financial help of Rs. 6,000, inclusive of insurance payments.

A door-to-door survey was conducted in April 2020 during COVID-19 to collect information from residents who required help.

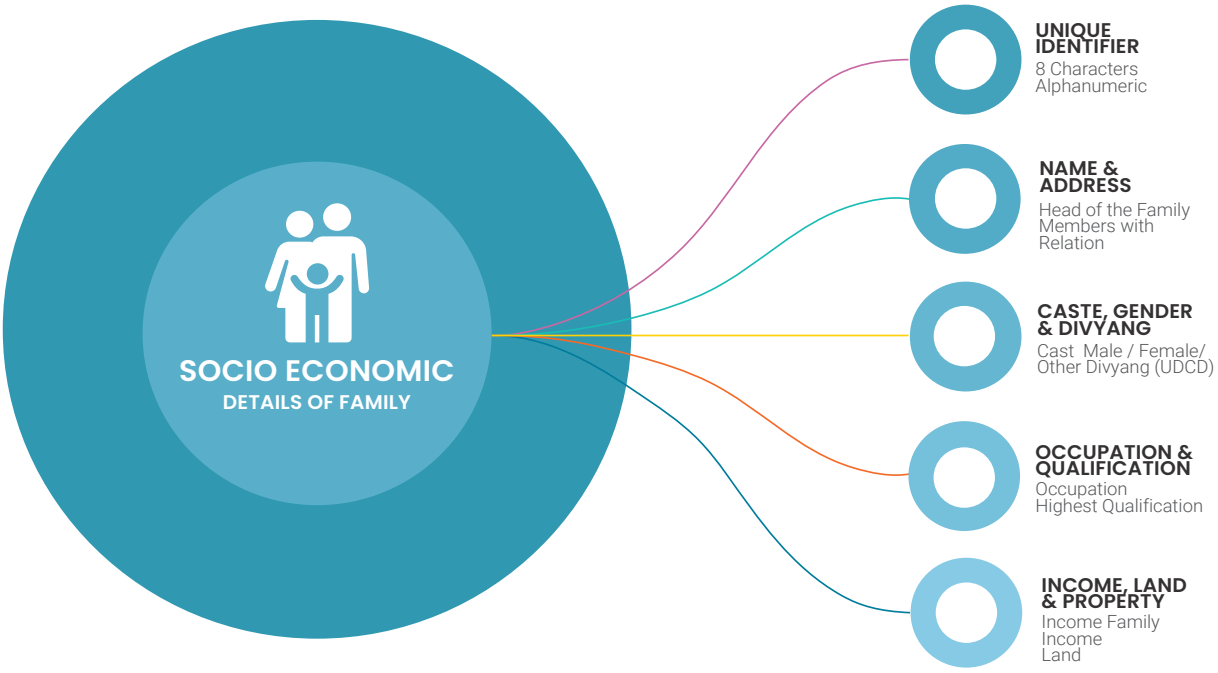
A door-to-door survey was conducted in April 2020 during COVID-19 to collect information from residents who required help.

Social Security Pension Scheme was merged with PPP in June 2020, and as a result, all citizen-centric services were also integrated. That gave PPP a huge boost, and citizens began to show up on their own.

Birth / Death and Marriage data have been integrated with this site to maintain the dynamic nature of the data. The Registrar General of India pushes daily data of Births and Deaths registered in the State to the Government of Haryana.

Verification

Since the data provided is self-declared by the citizens, in order to provide services, the data



▲ Fig. 6.1: An overview of Parivar Pehchan Patra

is electronically verified to the greatest extent possible, and if necessary, the residual data is sent for field verification. Following are the sources used for electronic verification:

- Central Board of Direct Taxes (CBDT) Income Tax Return (ITR) data for Income Range Validation
- HRMS (Human Resource Management System)/ Contractual Employees / Government Pensioners
- EPFO for Private Sector Employees
- Birth / Death Record
- Marriage Registration
- Board of Construction Worker Employees
- Public Distribution System

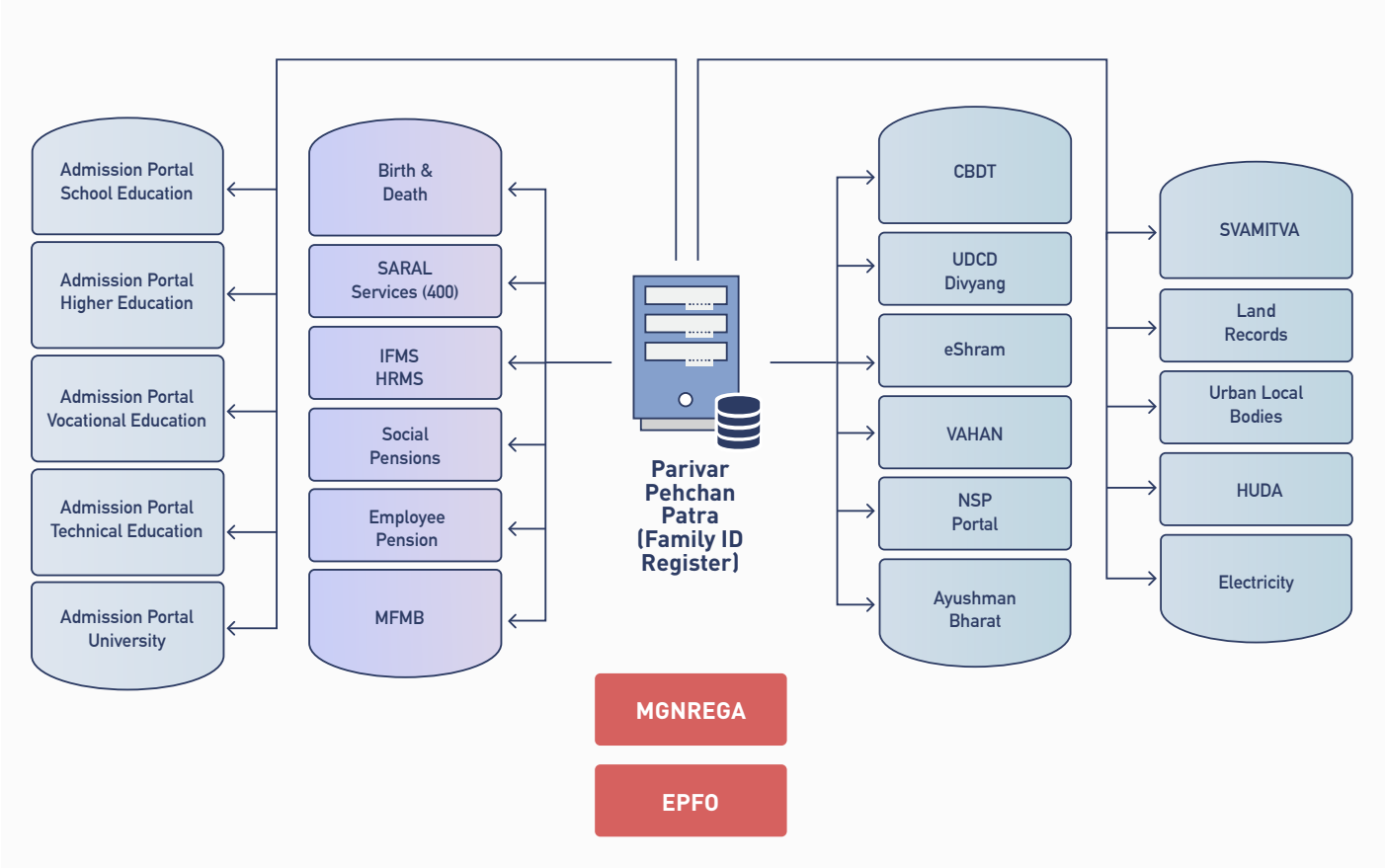
Physical Verification

For a gathering of 250–300 households' worth of residual data that wasn't electronically checked, a Local Committee (LC) was formed. An LC consists of a state government employee, a local data entry operator, a social worker, a volunteer, and a student. A mobile app was also enabled, where each LC member could enter specific information regarding each individual family member during door-to-door visits.

The mobile app is geo-fenced to ensure accurate data collection. A backend algorithm

▼ Fig 6.2: Parivar Pehchan Patra statistics

71+ lakh Families	**2.8+ crore** Members	**61+ lakh** Family Signed Information	**2.5+ crore** Member Signed Information
400+ Live Government Services	**60+** Government Agencies Integrated	**65+ lakh** PPP-Integrated SARAL Transactions	**51/54+ lakh** Family Income Verified
34.5/36+ lakh Caste Verified	**34.5/36+ lakh** Electricity Connection	**15/17+ lakh** SVAMITVA Verified Properties	**20/41+ lakh** Urban Properties



▲ Fig 6.3: Parivar Pehchan Patra Data Integration Graph

calculates a family's income range on the basis of field-collected data. (Refer Fig. 6.3)

Technologies Used

PPP is hosted at NIC State Mini Cloud and uses NIC Aadhaar Data Vault for safeguarding Aadhaar and other related data. Besides, it uses following technologies

- .Net Model View Controller (MVC) 4.5 framework for development
- MS SQL for backend
- HTML / jQuery / JavaScript used for front-end
- UIDAI database for demographic authentication and eKYC
- NIC Aadhaar Data Vault for storing Aadhaar data

Benefits

PPP has been integrated with SARAL portal, which hosts over 400 citizen-centric services from 60 State Government Departments.

It eliminates the need of carrying several documents to the government office to avail of the benefits of a government scheme. With the PPP, the process will be made much easier and more efficient.

This has resulted in 65 lakh PPP integrated SARAL transactions.

In addition, it offers following key benefits

- Pro-active service delivery
- Traces entitlements of families
- Weeds out ineligible beneficiaries
- Eliminates deduplication
- Integrated and continuously updated database
- Single source of truthing
- Service provision on validated data in FIDR
- Data enrichment with existing database, for example DoB is verified from school admissions
- Service provision on validated data in FIDR

Impact

- Old age pension is being proactively disbursed to the eligible citizens whose DoB and Income has been verified
- Caste verification has been done in advance, allowing citizens to generate SC and BC Certificate on the fly through SARAL portal
- Benefits of Mukhyamantri Vivah Shagun Yojna are delivered at time of Marriage Registration

Legal Framework

PPP is administered by the Haryana Parivar Pehchan Authority, which draws its power from the Haryana Parivar Pehchan Act, 2021.

The Act was passed in the Haryana Vidhan Sabha in August 2021 and later notified after assent in September 2021.

Way Forward

After looking at the success of PPP, the Prime Minister's Office invited the Government of Haryana and NIC Haryana State Centre to look at the feasibility of a nationwide rollout. Various State Governments such as Punjab, Himachal Pradesh, Bihar, Jharkhand, Manipur, Goa, and Maharashtra have shown a keen interest in the same. Furthermore, the source code has been shared with NIC Bihar to replicate the project in the State of Bihar.

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eGranthalaya

An Indigenous tool to modernise traditional libraries to eLibraries

Edited by **MOHAN DAS VISWAM**

Libraries play a vital role in the overall development of society by providing a variety of information services to citizens. In the modern era of information, they have become an integral part of both public and private organisations, enabling their employees to satisfy their information requirements and perform their duties effectively.

According to one estimate, only a few thousand libraries are fully automated, whereas the majority of libraries are either partially automated or have not yet begun the automation process. When presented with a challenge, NIC has taken the initiative to computerise government libraries by implementing eGranthalaya software. This initiative has helped libraries to transform themselves and become eLibraries in order to meet the growing information needs of library members.

eGranthalaya is a digital platform developed for the automation and networking of Government Libraries. It helps in converting traditional libraries to eLibraries. It provides a complete solution for Library Computerisation with Integrated Library Management Software, a Digital Library Module, and a Library Portal. Currently, it has been implemented across 6000 libraries, including Rashtrapati Bhawan and PMO Library.

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eGranthalaya

Introduction

eGranthalaya first started as an internal project at NIC Karnataka State Centre. The initial version was created for the Karnataka State Public Libraries. Realising its immense potential, the project was subsequently given to the NIC Library and Information Services Division, which assisted the software in reaching its full potential.

The application was redesigned with input from library professionals, who helped in improving the user interface and streamlining the workflow of library functions so that it can be used in any type of library.

Technology Overview

eGranthalaya was originally developed using Microsoft Technologies and was using the same till its third release. However, in consideration of the utility, economy, and popularity of Open Source technologies, efforts are being made to migrate the application onto the same in a phased manner.

In the first phase, the back-end component of the application has been migrated from Microsoft SQL Server to PostgreSQL, an Open Source database management system.

In subsequent phases, it is decided to migrate the front-end components of the application to an Open Source platform. Currently, the front-end is built with ASP.NET 4.0 and runs in a Windows environment using .NET Framework 4.7.

Table 7.1 shows the evolution of eGranthalaya over a period of 18 years since its first release.

eGranthalaya 4.0

eGranthalaya 4.0 is a web-based, cloud-ready application that can be used by member libraries for live data entry, issue-return, and other member services. It is hosted on NIC Cloud as a SaaS application in cluster mode with a central database for a group of libraries.

The benefits of the cloud version include the avoidance of local application installation, thus not requiring a server at the user's end; not requiring maintenance or backup at the user's

Version	Release Year	Technology / Platform	DBMS	Edition
1.0	2003	VB6 / ASP/ Non-UNICODE	SQL Server 7	Public Libraries
2.0	2005	VB6 / ASP/ Non-UNICODE	SQL Server 2000	Government Libraries
3.0	2007	VB.NET / ASP.NET 2.0/ UNICODE	SQL Server 2005	Network
4.0	2015	ASP.NET 4.0 / JQUERY / AJAX / UNICODE	PostgreSQL 9.4	Enterprise / Web-based / Cloud Ready

▲ Table 7.1: eGranthalaya version release timeline

end; and not requiring the participation of library staff in the implementation process, allowing them to focus solely on utilising the services.

It streamlines in-house activities of the library as well as member services. It helps traditional libraries to transform themselves to Digital Libraries. It provides

- Integrated Library Management Software (ILMS) with Digital Library Module along with a Mobile–Responsive Open Public Access Catalog (OPAC)
- An android-based mobile app for members;
- A cloud-based hosting environment with disaster recovery services
- Training, migration, roll-out services, and Help-desk support

Table 7.2 briefly describes both domain-specific and product-oriented features of eGranthalaya version 4.0.

Technology Used

- Front-end: ASP.NET 4.0
- Back-end: PostgreSQL 14.3
- Interface: CSS/ JavaScript / jQuery with AJAX enabled controls
- Cloud Resources: 6 web servers with a load balancer; 7 database servers; and 2 digital library / file servers (Refer Fig. 7.1)

Architecture

In a three-tier architecture, the presentation layer and business logic layer are hosted on web servers, while databases are hosted on a separate virtual machine (VM).

Many of the common services (email, SMS, RFID, catalogue search) have been integrated as APIs that are consumed by all instances, while several external APIs are integrated within the application layers to download catalogues from external resources. Each cluster consists of a replicated instance of the same application with a centralised database. As depicted in Fig. 7.1, approximately 50 clusters have been created using 15 VMs and one load balancer.

Modules

eGranthalaya 4.0 features two modules. These are described below:

Data Entry Modules

- Database Administration
- Library Administration
- Master Data
- Books Acquisition
- Books Cataloging
- Circulation
- Serials Management
- Micro-Document Manager
- Library Budget
- Staff Search
- OPAC

Web OPAC Module

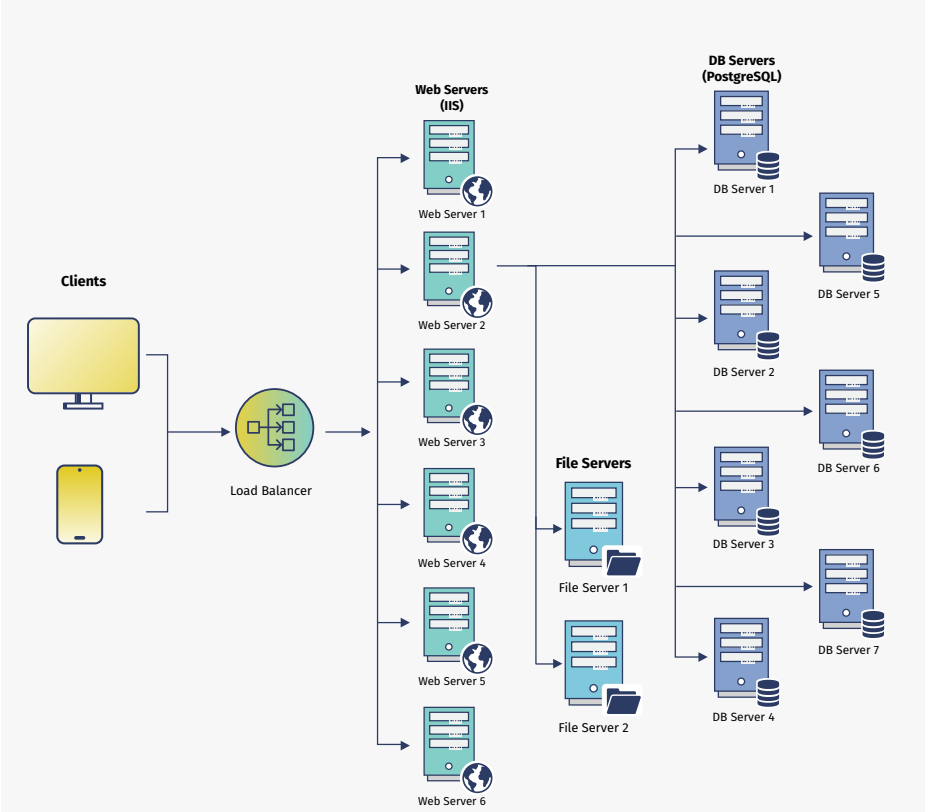
- Browser-based Interface
- Search Library Catalog
- Basic / Advance Search
- Uses Boolean Operators
- Federated Search
- Results get integrated with Net APIs to
- Display details of the documents from NET
- Recent Additions to Library
- Members Services behind Login
- Access Digital Library Online

Implementation

Since 2002, four versions of eGranthalaya have been released and are Implemented successfully across 6000 libraries in the country. Besides, here are few key stats about implementation of eGranthalaya

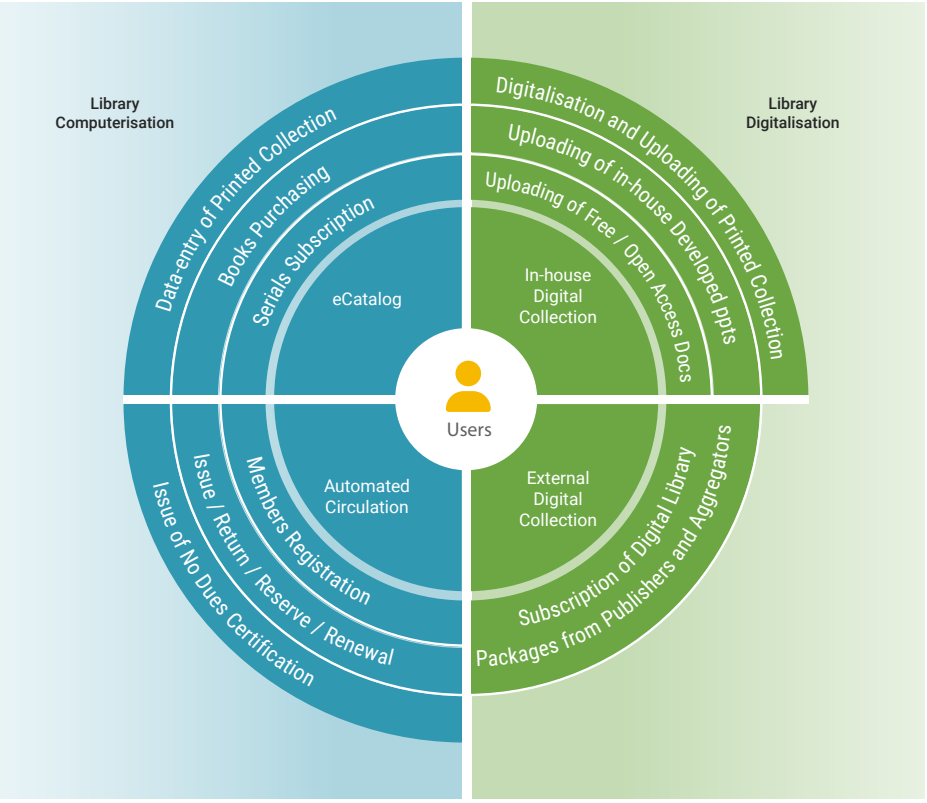
▼ Table 7.2: Features of eGranthalaya Version 4.0

S. No.	Domain Specific Features	Product Oriented Features
1	Web-based solution	Cloud-Ready Application with mass deployment
2	Application Work-flow as per Government Libraries	Multi-Tenant Application
3	Adheres to Library Standards such as AACR2/MARC	Single Sign-On integrated with Parichay of NIC
4	Z39.50 built-in Client Search	Scalable as per requirements
5	Export / Import data in common formats	Integrated with PostgreSQL 14.3 (Other DBMS may be used)
6	Search module with Basic/Advance/Boolean features	Shared Cataloging with catalog download facility
7	Generate Bibliography in AACR2 format	User configurable components
8	CAS/SDI Services for Library members	Online Help and user support
9	Full-Text News Clipping Service	Secure Application with Audit from NIC empaneled agency
10	Digital Library Integration with e-Books Manager	Hosting on Cloud with adequate resources
11	Inter-Library Loan API	Supports Multi-Tasking at Multiple Screen at same time
12	Compliance with Library Technology and ICT prevalent in Libraries	Well written documentation and user manual
13	Mobile responsive access of e-Library services in member devices	API Integration
14	Well Integrated with KOHA and SOUL	Integration of external API for downloading resources



▲ Fig 7.1: eGranthalaya Architecture

▼ Fig. 7.2: eGranthalaya on Cloud



- Implemented over 6000 libraries including Rashtrapati Bhawan Library, Prime Minister's Office Library, Vidhan Sabha Libraries and others
- 2600 libraries are running on NIC Cloud, which has generated 1.92 crore holdings records belonging to 1.16 crore books catalogue records
- 9.36 Lakh members are registered to access eLibrary online
- Over 25000 full-text documents are uploaded
- Over 175 training programmes have been conducted and trained over 4000 librarians

Benefits

eGranthalaya has been developed keeping in view the requirements and workflow of government libraries in the country and provides a user-friendly interface for library staff as well as library members. Some of the key benefits of using eGranthalaya are

- Fully funded and freely available by Government of India
- Follows International standards prevalent in libraries such as MARC21, AACR2, UNICODE, SRU / SRW, Z39.50, NCIP / SIP2 for RFID, Barcode, Smart Card, E-Books Viewer, XML / JSON based web services, W3C standards
- Integrated with Open APIs such as RFID, ISBN Downloader, News API, ILL API and Portal API, to extend its services beyond the scope of platform
- Stable product releases
- Standard tools for Library Automation
- Android-based mobile app for library members Built-in Data migration service
- Shared cataloging
- Union catalog as a by-product
- Mobile responsive OPAC
- Integrated with email and SMS for generating alerts and notifications
- Nominal cost for setup by NICSI
- Training and tech support by NICSI

Way Forward

eGranthalaya is not only an ILMS product, but it has evolved as a go-to solution for government libraries with the passage of time. In future, in order to take it to a new level as a discovery tool, it will feature a more powerful search engine. It will be integrated with other similar products, including the Union Catalog and Shodh Ganga of INFLIBNET, the National Digital Library of IIT Kharagpur, and the Union Catalog of DELNET. This will aid in the development of an integrated network of automated libraries—a system with a single access point.

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SVAMITVA

Survey of Villages Abadi and Mapping with Improvised Technology in Village Areas

Edited by **MOHAN DAS VISWAM**

Survey of Villages Abadi and Mapping with Improvised Technology in Village Areas (SVAMITVA) scheme aims to provide an integrated property validation solution for rural India. The scheme clearly establishes property ownership in rural populated areas by mapping land parcels using drone technology and issuing legal ownership cards (Property cards / Title deeds) to the rural household owners. This would allow them to use their property as collateral for loans and other financial aid from financial institutions. It would aid in the determination of property tax, which would accrue directly to Gram Panchayats or be added to the state treasury. In addition, it would help in the preparation of a better Gram Panchayat Development Plan (GPDP) by making use of high quality Geographic Information System (GIS) maps.

SVAMITVA Dashboard

SVAMITVA Dashboard is an eponymous dashboard that has been developed to showcase the progress in terms of Key Performance Indicators (KPIs). It displays the scheme's progress by integrating and updating seamlessly the on-field data from the Survey of India (SoI) using an application programming interface (API). It has been designed on the basis of monitoring parameters of the scheme.

> SVAMITVA scheme is a reformative step towards the establishment of clear ownership of property in rural inhabited areas by mapping of land parcels using Drone technology and providing a 'Record of Rights' to village household owners with the issuance of legal ownership cards to the property owners. The scheme helps in facilitating monetisation of properties; reducing property related disputes; and making comprehensive village level development plans. Thus, it would be the stepping-stone towards achieving Gram Swaraj in the true sense and making rural India Atmanirbhar.

The activities of SVAMITVA can be divided into four stages.

First Stage (Preliminary Activities): In this stage, Abadi areas are notified by the respective state officers. An awareness programme is also implemented to educate the rural populace on the surveying methodology and its benefits. Meanwhile, local officials are trained to handle the project activities.

Second Stage (Pre-survey Activities): The Continuously Operating Reference Stations (CORS) are established by Survey of India (SoI) nationwide. CORS is a network of permanently installed reference stations which broadcast corrections, continuously over an Internet connection. It can solve the problem of data accuracy and real-time data acquisition. It enables surveyors to differentially correct static Global Positioning System (GPS) measurements, which would aid in geo-referencing RAW (format) images collected from drones and extract the demarcation of the land to vector format.

Third Stage (Survey Activities): The area is earmarked with limestone in consultation with the Gram Panchayat and land owners. Following which, the surveying is done with drones.

Fourth Stage (Post-survey Activities): In the final stage, the spatial lab at NIC Headquarters process the orth-rectified imagery output of the drone survey. The processed data is then incorporated into Bharatmaps in order to power the analytics dashboard.

Also, the meta-data associated with the

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properties is being captured during the field visit by the local officials. This data is mapped with the spatial data captured by the drones, forming the basis for the creation of property cards for rural Abadi residents. Each process activity is properly recorded and showcased over the dashboard for everyone's benefit. (Refer Fig. 8.3)

Benefits

Key benefits of SVAMITVA Dashboard are

- KPI-driven dashboard with updated information from the Survey of India
- Overall progress monitoring
- Daily progress monitoring
- Spatial visualisation of drone flown state-wise and district-wise information navigation
- Analytical reports for decision-making
- Automated SMS notifications to stakeholders about drone flight schedules

Technical Specifications

SVAMITVA dashboard architecture can be divided into spatial and non-spatial architectures. The dashboard is powered by the robust Java Spring MVC API over a Postgres database. On the other hand, the service-oriented architecture is deployed for synchronised map delivery over cached service for effective operation over low bandwidth powered by Bharatmaps.

Components

- **User Management:** Nodal officers can use this module to assign user roles, i.e., who can access the portal to monitor the scheme. (Refer Fig. 8.6)
- **Document Management:** This module helps the users manage the documents. Once uploaded, files are reflected here. (Refer Fig. 8.7)

SVAMITVA Scheme is a technology driven solution which uses drones to map rural Abadi areas. NIC has been mandated to provide IT support and create GIS data repository and integrate the same with Grammanchitra application for rural planning. The SVAMITVA dashboard provides a gateway for monitoring the scheme effectively. SVAMITVA Scheme is playing a pivotal role in making rural India self-reliant in a true sense.

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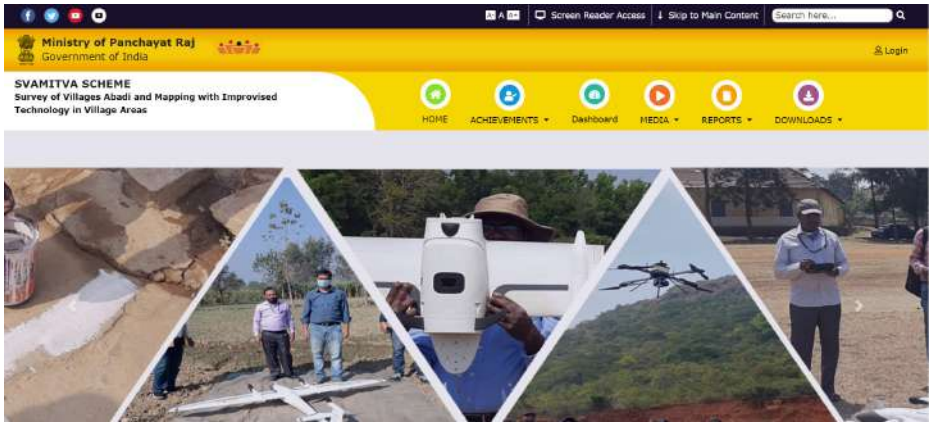
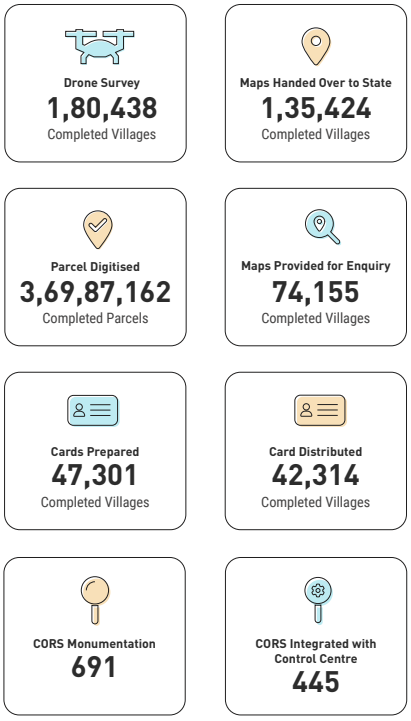


▲ Fig. 8.1: SVAMITVA Portal Homepage



▲ Fig. 8.2: SVAMITVA Portal Statistics

- **Drone Flying Monitoring:** With the help of this module, users can keep an eye on drone surveys taking place all over the nation. The unsurveyed areas are marked as red-tape areas. (Refer Fig. 8.8)
- **Dynamic Content Management:** This allows management of various publications, such as media reports and IEC activities.
- **Report Management:** This module assists in generating a number of reports for the SVAMITVA scheme, including reports on geospatial data, progress, and drone surveying. (Refer Fig. 8.9)
- **Drone Flying Notified Villages List:** This module helps in tracking the notified villages for drone surveying in various districts across the state. (Refer Fig. 8.10)

SVAMITVA Scheme is a Government of India initiative that uses drones and Continuously Operated Reference Stations (CORS) to map rural Abadi areas with the active participation of State and Survey of India. This has brought thousands of square kilometers of land under the mainstream credit-pool. Benefits are realised by local government planners and monitors as Digital maps are being utilised for various applications. Digitised maps are being leveraged to help Panchayats prepare better development plans. The scheme is set to change how land gets measured, which has seminal implications. As in September'22, the job is nearly half done.

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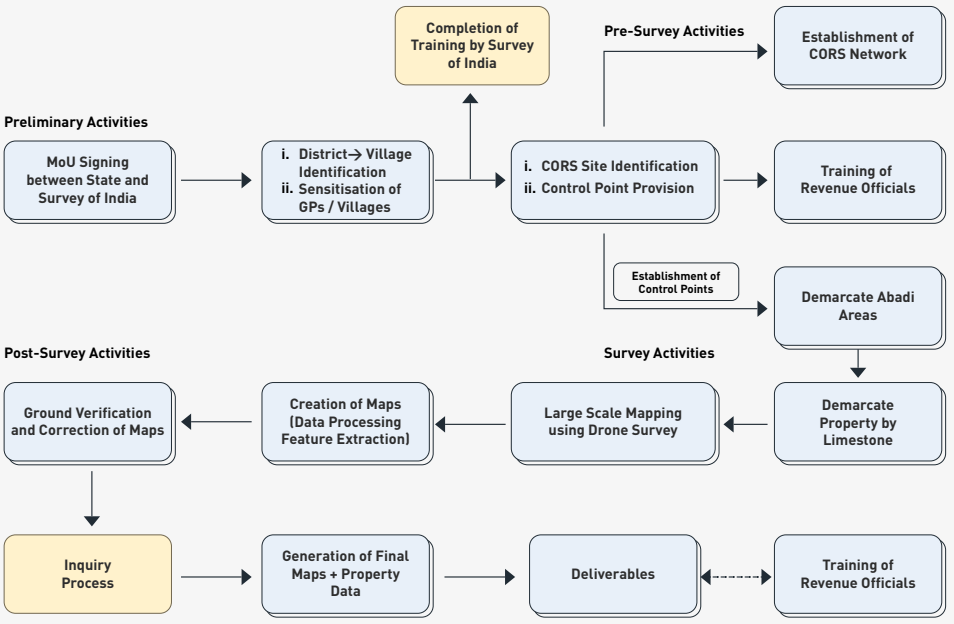
Government of India

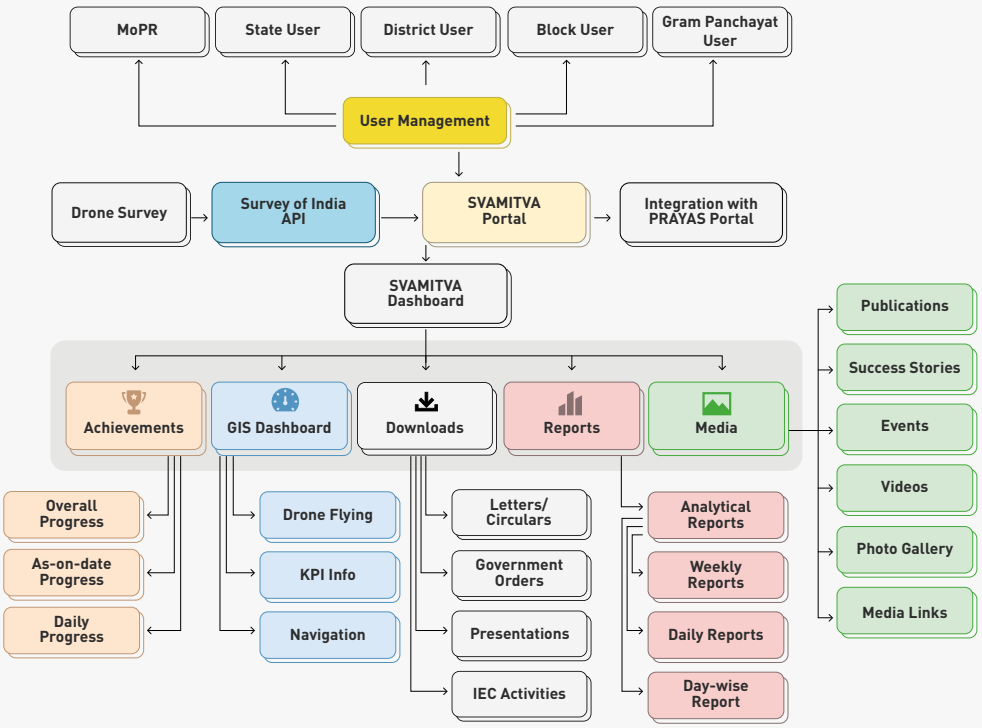
- **Success Stories Management:** Nodal officers can use this module to add and publish new success stories at the state / district level based on approval.
- **State Dashboard:** This module gives a brief overview of progress made on various scales in the SVAMITVA scheme across a particular state.
- **Spatial Management:** This module provides a brief summary of SVAMITVA scheme across the country. It also helps user to track the success of the project across the country through KPI monitoring. The module also has provisions for document and report management. (Refer Fig. 8.11)

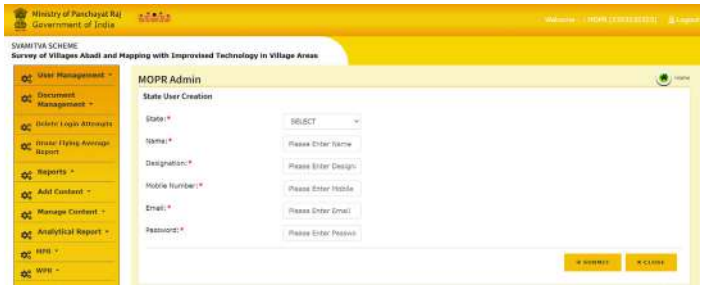
▲ Fig. 8.5: SVAMITVA Drone Data integrated with Gram Manchitra Application to develop geospatial tools for planning (1) street lights, (2) road construction, (3) service areas, (4) heatlhcare centre and (5) telecom asset management area under Gram Panchayat Development Plan.

▼ Fig. 8.3: SVAMITVA workflow

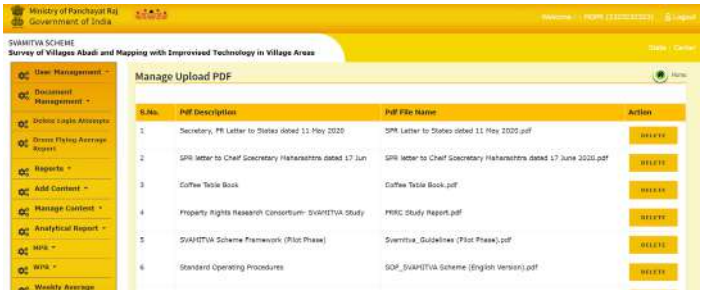


▼ Fig. 8.4: SVAMITVA Dashboard User Activity Flow

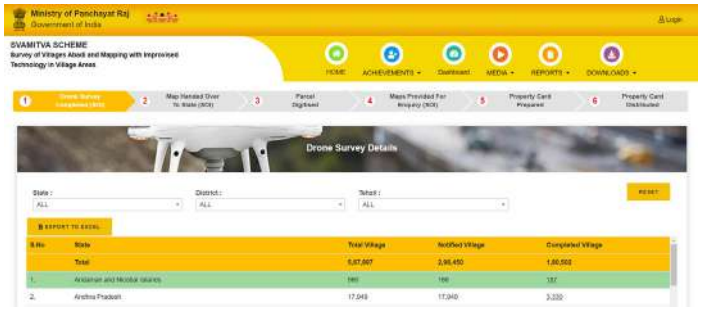




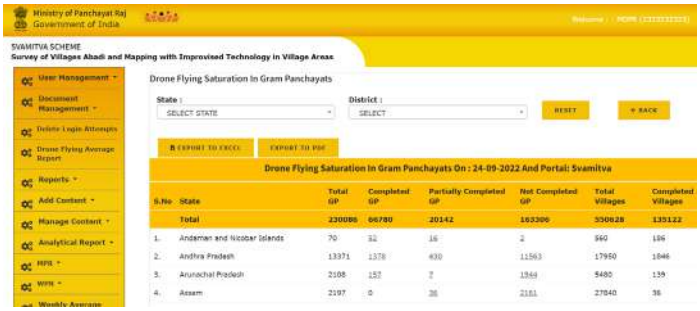
▲ Fig. 8.6: SVAMITVA User Management



▲ Fig. 8.7: SVAMITVA Document Management

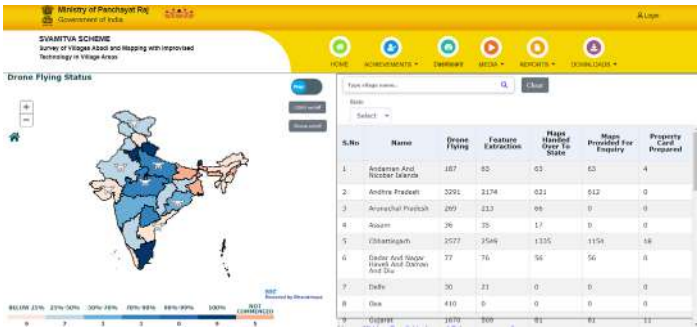


▲ Fig. 8.8: SVAMITVA Drone Flying Monitoring



▲ Fig. 8.9: SVAMITVA Report Management

▲ Fig. 8.10: SVAMITVA Drone Flying Statewise Notified Villages



▲ Fig. 8.11: SVAMITVA All India Monitoring

Way Forward

It is proposed to analyse the data collected by a drone survey through the creation of various AI / ML-based models, which can help identify development gaps during the implementation of various schemes at the Gram Panchayat level.

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OxyCare

Monitoring Supply and Operation of Oxygen Devices in India

Edited by **MUKESH KUMAR RALLI**

During the second COVID-19 wave, the oxygen requirement in health institutions increased exponentially. The Government of India planned to install enough oxygen equipment in all healthcare facilities around the nation to accommodate this enormous demand.

In line with this vision, OxyCare has been developed by the NIC Himachal Pradesh State Centre in consultation with the NIC Health Informatics Division in a very short time to meet the oxygen requirements in the country during the second wave of the COVID-19 pandemic. It monitors the functioning of the oxygen devices, namely, Oxygen Concentrators, Pressure Swing Adsorption (PSA) Oxygen Generation Plants, Ventilators, and Cylinders. As of now, OxyCare has been implemented across all the States and Union Territories of the country, covering multiple oxygen devices.

The timely availability of oxygen in Hospitals became a major requirement during the second wave of the COVID-19 pandemic in May-June 2021. The Ministry of Health & Family Welfare, Government of India initiated the OxyCare project to ensure timely supply of various Oxygen equipment, installation and proper functioning, to Government Health Institutions at grass root level. OxyCare MIS has been developed by NIC to meet this challenge.

Features

The main objective of OxyCare is to ensure the timely delivery and proper installation of oxygen equipment at the last level of health facilities across India, up to Community Healthcare and Wellness Centres. OxyCare monitors them to ensure their proper functioning and maintenance. The Prime Minister's Office, the Ministry of Health & Family Welfare, the States, and the Districts can access this information on the portal in the form of a role-based dashboard.

While the delivery, reporting, and monitoring are done through the web-based portal, the receipt of equipment is done through an associated mobile app developed for the health facilities. The problem reporting and annual maintenance contracts are also monitored through this ecosystem.

The OxyCare mobile app is available on both Android and iOS platforms and uses a Secure Quick Response (QR) Code to receive only the correct equipment since the QR code cannot be read by other apps.

For monitoring PSA Oxygen Plants in a big hospital, real time data collection and reporting are done through an Internet of Things (IoT) based device for making better decision at the higher management levels.

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The OxyCare - Oxygen Management Information System has been developed through collaborative efforts and proved to be very useful for the users across India. The IOT based monitoring of PSA plants has been instrumental in making these plants functional quickly to meet the oxygen demand.

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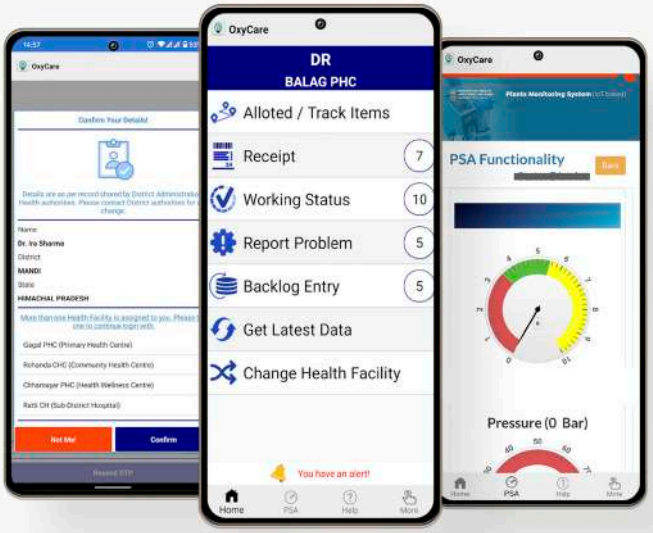


▲ Fig. 9.1: OxyCare Mobile App

Some of the key features of OxyCare are:

- Single Sign-On through Government Email
- Different login interface for App and Portal for App users
- Responsive Website
- Dynamically controlled role-based application access
- Device Stock Management
- Web interface for all Stakeholders / Data Sharing
- Data analytics / Graphs / Warnings / Auto-alert emails
- Complaint Response Management System
- AMC, FAC Certificate, Problem Reporting and Resolution
- Dashboard (IoT-PSA, OCs, Ventilator, Cylinder)
- Mobile apps on Android and iOS platforms for reading secure QR codes and other functions at the Health facility level
- OxyEngineer mobile app for resolving complaints sent by Health facilities through the OxyCare app
- For PSA plants, IoT devices have been set up to send live functioning data to portal for monitoring oxygen flow, purity, pressure and runtime

Technology Used

- .Net framework 4.5 with MS SQL Server 2019
- Xamarin for mobile app development for Android and iOS
- Bharat Maps for GIS
- Secure QR Code generation
- IoT-based data capturing and dashboard using High Charts
- Cloud hosted, security audited and load balancer enabled

▼ Fig. 9.2: OxyCare Portal Homepage

Innovations Applied

IoT-based Monitoring of PSA Plants

Every PSA Oxygen Generation Plant has a pre-fitted IoT device which transfers data related to the functioning of the plant to central server at a fixed time interval. The photographs of installed plants and its GPS locations are also captured and made available along with relevant parameters to monitoring authorities as shown in the Figure 9.3.

OxyCare Mobile App

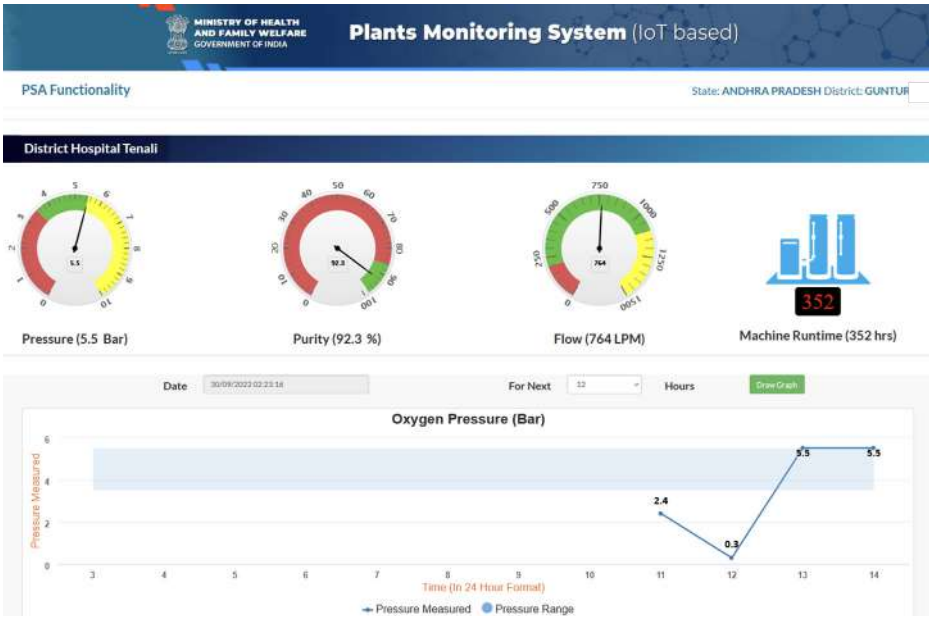
OxyCare mobile app supplements the OxyCare portal and is used by Health Facility In-charge (HFIC) across various health facilities in the country to record the receipt of various medical equipment. The app also provides a feature to add functioning details of oxygen equipments, report problems (if any), and add mock drill details for the PSA Oxygen Plant.

As the app is being used by an exclusive user group (HFICs), users need to be whitelisted. This is done by the District Nodal Officers / Chief Medical Officers by first updating the Health Facility Master file and adding the HFIC details through the Health Facility Management, available at the OxyCare portal. Later, the prospective user can check his or her details by clicking on the Health Facility link on the web portal **(https://oxycare.gov.in)**.

Benefits

OxyCare portal has proved to be quite useful to the Ministry of Health & Family Welfare in allocation, supply, installation, monitoring and maintenance of oxygen equipment in Health Facilities pan country. Some of these benefits are listed below

- Single system for tracking supply, installation of multiple oxygen equipment
- Tracking of supply chain from manufacturers' location
- Real time IoT-based monitoring of devices, mock drills
- GIS-based plotting of installed devices along with photographs
- Futuristic platform for meeting similar requirements / exigencies during any pandemic
- Online problem reporting and its resolution using OxyCare Engineer mobile app
- Role-based dashboard for device delivery/ operational status for each level
- System generated email alerts / status report to State / Ministry administrators



▲ Fig. 9.3: IoT-based data transfer and meters for pressure, purity and flow of PSA Oxygen Generation Plants

▼ Fig. 9.4: MoHFW and NIC teams receive the CSI eGovernance Award of Excellence 2022

OxyCare - Oxygen Management Information System has been developed by NIC in difficult times during the Covid19 pandemic with innovative features like secure QR code which can be read by the specific mobile app used by Health Facility Users. NIC has done excellent work to enable Ministry to fast track the supply and availability of oxygen in rural and urban health facilities across India.

Sunil Kumar
Dy. Director General & HoG
NIC Health Projects

Award

OxyCare portal has been conferred upon the Award of Excellence by CSI SIG eGovernance Awards 2021 under the Project Category. (Refer Fig. 9.4) It is implemented in all 36 States / UTs covering more than 2 lakh health facilities with over 3 lakh oxygen equipments.

Way Forward

OxyCare portal has achieved the target of providing various oxygen equipment in health facilities across the country. Technologies like Secure QR code generation and scanning and IoT-based monitoring of the working of PSA Oxygen plants have been the enablers. The portal is being enhanced to meet any kind of exigency during such pandemics in the future.

Contact for more details

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eTrans'22

EMPOWERING CITIZENS WITH NEXTGEN TRANSPORT SERVICES

Two-day Zonal Workshop on eTransport Project

The Ministry of Road Transport and Highways (MoRTH) and the National Informatics Centre (NIC) held a two-day zonal workshop titled eTrans'22 (29-30 August 2022) in Udaipur, Rajasthan. The workshop was attended by delegates from the Transportation and Police Departments of numerous state governments. NIC's eTransport project, a crucial national initiative, was the topic of discussions. Also, deliberations were made on the use of new technology and business processes to propel the project to a higher level.

Shri Amardeep Singh Rai, ADG Traffic (Punjab), Shri Vikas Garg, Transport Secretary (Punjab), Shri Piyush Patel, IGP (Gujarat), Smt. Anupam Kulshrestha, ADG Traffic (UP) and Shri V. K. Singh, ADG Traffic (Rajasthan) were among the dignitaries from the Transport and Police departments who took part in the workshop. Shri Pawan Joshi, DDG, Shri Joydeep Shome, DDG, Shri B. V. Reddy, STD, and Shri Rana Pratap, STD, were the organising officers from NIC. Over 125 delegates from 12 States and UTs participated in the workshop.

In the post-inaugural session, new services and enhancements in Vahan, Sarathi, eChallan and Pollution Under Control Certificate (PUCC) were presented. A demo-presentation on the NextGen mParivahan mobile app showcased the additional citizen-centric services offered by the app and how it will help the citizens in availing services from the comfort of their homes. A detailed presentation was made on the Vehicle Location Tracking and Emergency Alert System (VLT&EAS) and how it can play a pivotal role in enhancing the security of Public Road transport in India.

An informative session on the Integrated Road Accident Database (iRAD) app provides accurate and uniform road accident database for facilitating easy forecasting and decision-making for the reduction of road accidents. This was followed by an open house session for brainstorming on innovative ideas and recording valuable feedback from participants.

The workshop ended with a panel discussion, Way Forward, eTransport applications, deliberating on standardisation of the eTransport applications and processes and making the standards uniform across the country.

CiSO CONNECT'22

SECURE GOVERNMENT

As we converge on the next phase of the digital economy, we are also witnessing an increase in cyber security threats that put major organisations, critical infrastructure, and vital data at risk. These increasing disruptions with hybrid working models are creating fissures that allow security threats to escape. It is not only security, but general data consumption that is marking a cardinal shift in preference and usage of digital products and services.

Sensing the need of the hour, the Ministry of Electronics & Information Technology and NIC organised a one-day workshop, CiSO Connect 2022, to create awareness around best cyber security practices in digital realms for frontline IT officials from various government organisations at the India Habitat Centre, New Delhi.

The workshop was inaugurated by Shri Alkesh Kumar Sharma, Secretary, MeitY in the august presence of Dr. Rajendra Kumar, Additional Secretary, MeitY, Shri Rajesh Gera, Director General, NIC, and Dr. Sanjay Bahl, Director General, CERT-In and saw participation from Chief Information Security Officers (CISOs), Deputy CISOs, and other IT officials from various ministries and departments.

During the event, Secretary, MeitY stressed upon the importance of a cyber-resilient ecosystem for making the nation well prepared for the next generation of the digital economy. He urged all CISOs and ACISOs to prepare security plans for their respective organisations within the next 30 days, looking at the gravity of the situation.

Shri Rajesh Gera, DG, NIC, spoke on the prevailing cyber threats and tools to manage the same. He especially highlighted the need to re-envision and manage threats emanating in this ever-evolving digital world. Following that, Dr. Sanjay Bahl, DG, CERT-In, promulgated the Cyber Crisis Management Plan for countering cyber attacks during the event. He explained the important activities of CERT-In and shared a broader perspective on Indian cyberspace and its challenges.

Dr. Seema Khanna, DDG & HoG NIC-CERT, explained the ever-evolving roles and responsibilities of CISOs and ACISOs in this digital era. She outlined areas of focus for CISOs that include Information Security Management, Development & Operations, Application Security and Incident Response & Security Operations.

Shri R. S. Mani, DDG & GC NIC-CERT, NIC gave a brief presentation on Secure Government Network and emphasised the need for audit and compliance for digital solutions.

Later, the Cyber Security Group led by Shri C. J. Antony, DDG & CISO, NIC, provided insights into technical aspects of changing cybersecurity paradigms.

The workshop saw positive feedback from all its participants and is set to make a comeback in the upcoming year.

Server Security

Importance of Server Security in Layered Security Approach for Data Protection

Edited by **MOHAN DAS VISWAM**

Servers provide a variety of services to internal and external users of an organisation. They manage and store sensitive data for the organisation. Some of the most common types are web, email, database, infrastructure management, and file servers. Server security deals with the protection of apps, data, and resources stored on the servers. It comprises tools and techniques preventing intrusion, hacking and other malicious activities. These measures vary and are typically implemented in layers.

Common Security Threats

Malicious actors may exploit software bugs in the server or its underlying operating system (OS) to gain the unauthorised access to the server. With Denial of service (DoS) attacks, they target servers, to prevent valid users from using their services. In cases of weak or no encryption, they can also access to sensitive data or network resources. After compromising a server, they may replicate the tactics against other entities. These attacks can be direct (from a compromised host against an external server) or indirect (by placing malicious content on a compromised server).

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With the rise of web-based apps and services, there is an increase in sophistication and number of cyber-attacks. Massive data breaches have become common and cost of these breaches have sky-rocketed. The primary targets of these attacks are servers hosting the sensitive apps and information. Cyber Security Solutions deployed on the servers have emerged as primary defence mechanisms to protect the apps and information from cyber-threats. These solutions ensure Confidentiality, Integrity and Availability of information stored in the servers.

Measures for Securing Servers

The first step in securing a server is to secure the underlying components such as OS, frameworks, web servers, and databases, which are entry points for cyber-criminals to launch attacks. Many issues can be avoided if things are configured properly. Some of the key measures for securing a server are:

- **Vulnerability Assessment (VA) and Patch Management:** VA should be done by using a state-of-the-art tool to identify vulnerabilities. Its report can be used by the application owners to plug those vulnerabilities. After installing the relevant software, apply patches or upgrades to address the vulnerabilities.
- **Hardening and Configuring the Server:** OEMs regularly release easy-to-install component configurations. When configuring a server, remove unnecessary services, apps, protocols, and non-removable components. If possible, install the minimal OS configuration and later configure it as needed. Remove / disable common services and apps if not required such as file and printer sharing services (e.g., Windows Network BIOS, Network File System, FTP), wireless network services, remote control and access programmes (e.g., Telnet), directory services (e.g., Lightweight Directory Access Protocol, Network Information System), web services, email services (e.g., SMTP), language compilers, system development tools, and network management tools (e.g., Simple Network Management Protocol (SNMP)).
- **Configure User Authentication:** The users who can access the server may range from a few authorised employees to an entire internet community. However, the number of users (admins) who can configure software components can be limited. To enforce policy restrictions, the server admin can configure the server to authenticate a

user by requiring proof of identity. Even if a server allows unauthenticated access, administrative and other specialised access should be limited to specific individuals. In special cases, such as high-value / high-risk servers, organisations may also use alternative authentication mechanisms such as biometrics, smart cards, client / server certificates, and one-time password systems. The reusable authentication mechanisms should be discouraged as they risk data interception. To ensure the appropriate user authentication is in place, take the following steps:

Remove / Disable Unnecessary Accounts: Generally, default configurations for guest accounts, admin or root level accounts, and local or network service accounts are common for each server. Since default account names and passwords are well-known, remove or disable them to prevent intrusion. Change names and passwords on retained accounts. This should be consistent with the organisation policy because they are often used to breach security.

Disable Non-Interactive Accounts: Disable accounts that do not require an interactive login. For Unix / Linux systems, disable the login shell or provide a login shell with NULL functionality.

Create User Groups and User Accounts: Assign users to the appropriate groups. Then assign rights to the groups, as per the deployment plan. This approach is preferable for assigning rights to a large number of users. The deployment plan helps to identify authorised users for each computer and service. It is advisable to only create necessary accounts and permit shared accounts if there is no viable alternative.

Configure Auto-Time Synchronisation: Some authentication protocols (e.g., Kerberos) do not function if the client and authenticating server have a significant time difference. These servers must auto-synchronise with a reliable time server that uses Network Time Protocol (NTP) for synchronisation.

- **Form Organisational Password Policy:** Check password parameters are properly addressed in the password policy, which includes password length, complexity, ageing, reuse, authority and security.

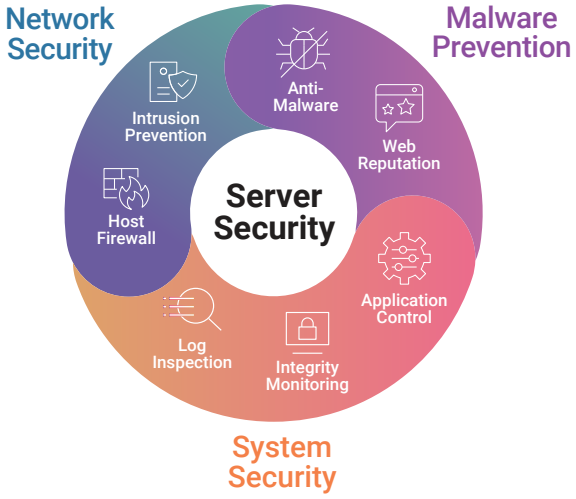
- **Configure Server Resource Controls:** Common server OSs provide the capability to specify access privileges individually for files, directories, devices, and other resources. By carefully setting access controls, the server admin can reduce server breaches. For e.g., denying read access to files and directories ensures data confidentiality, and denying unnecessary write (modify) access maintains data integrity. Furthermore, enable auditing to monitor attempts to access protected resources. In some cases, OS can be configured to provide an isolated virtual environment that a can be run within the server.

- **Configure Additional Security Controls:** OSs often do not include all the necessary security controls. In such cases, administrators need to select, install, configure, and maintain additional software to ensure the server security. There are numerous solutions available globally for this. Some of their key features are:

Anti-malware: Detects and blocks malicious software and protects servers in real time. It can be run on demand or set up to run on a fixed schedule.

Intrusion Prevention Software (IPS): Examines the traffic at the packet level and searches for protocol deviations, policy violations and other suspicious activities such as byte sequence replacement, packet drop, and connection reset that signal an attack. It can detect and block known / unknown / zero-day attacks that target vulnerabilities in server applications.

Host-based Firewall: It is a bi-directional stateful firewall that is responsible for preventing packets from unauthorised sources from reaching host applications. It provides broad coverage for



all IP-based protocols and frame types and filters IP and MAC addresses. It examines the header information in each network packet to control traffic based on direction, frame, transport protocols, source / destination addresses, ports, and header flags. It can thwart both DoS attacks and reconnaissance scans.

Web Reputation: Protects against threats by blocking malicious URLs and checks the reputation of websites by using reputation databases for potential involvement in the malware cycle. The reputation is correlated with the enforcement policy for controlling access based on the credibility score.

Virtual Patching: Intrusion Prevention Rules (IPRs) can avert attacks on unpatched applications. This prevents host from being exploited till the relevant patches are available. Once the patch is applied, IPRs can be unassigned. The process is called Virtual Patching (VP). It does not replace the regular system updates, but can be used when an application is no longer supported.

Integrity Monitoring: Provides real-time detection and reporting of malicious activities and unexpected changes on the server. It tracks both authorised and unauthorised changes made. The ability to detect unauthorised changes is critical as it can indicate the compromise.

Log Inspection: Collects and analyses software logs for suspicious behaviour, security events, and administrative events across the data centre. It optimises the identification of important security events buried in multiple log entries. Suspicious events are forwarded to a Security Information and Event Management (SIEM) system or a centralised log server for correlation, reporting, and archiving.

Application Control: This is an information security practice that restricts the execution of unauthorized applications by whitelisting and blacklisting them. It detects changes to the inventory of executable software such as software installed by users, new web pages, python scripts, unscheduled auto-updates, and zero-day malware.

- **Security Testing / Auditing**: Periodic security auditing / testing helps in identifying vulnerabilities and ensure the existing security measures are effective and properly configured (for e.g., required cryptographic algorithms are in use to protect network communications). Common methods for testing servers include vulnerability scanning (VS) and penetration testing (PT). VS usually entails using an automated vulnerability scanner to scan a host or group of hosts on a network for vulnerabilities. PT is a process designed to compromise a network using the tools and methodologies of an attacker. It involves identifying and exploiting the weakest areas of a network to gain access to the remainder of it, eventually compromising the overall security. VS should be conducted periodically, at least monthly, and PT should be conducted at least annually.

Conclusion

The proper implementation of server security measures plays a key role in the protection of applications and data on the servers and ensures effective service delivery to the citizens.

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Crowdsourcing Software Security

Enhancing Security by Secure Code Collaboration amongst Developers

Edited by **MOHAN DAS VISWAM**

Writing secure code in the Software Development Life Cycle (SDLC) phase and adapting to security by design should be a top priority for good developers. The benefit of secure code is that many of the potential exploits and attacks can be simply prevented by writing better and more secure code.

What is Secure Coding?

Secure coding, or secure programming, involves writing code in a high-level language that follows strict principles to prevent the potential vulnerabilities that could expose data or cause harm to a system. It is more than just writing, compiling, and releasing code into applications.

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Software vulnerabilities are always on the rise. They may exist at any layer in the software, including the operating system, application server, database server, etc. If not addressed, they may get exploited, and organisation's data may be breached, and in a worst case scenario, even a ransomware call may come up. As more and more government services go online, insecure web apps of important government services (G2B, B2G, G2C, C2G and G2G) can result in data theft, loss of confidentiality, financial losses, and service unavailability. The industry has come up with a plethora of tools and technologies to address these issues, but one of the cheapest and most economical ways is to develop a secure SDLC and write secure code.

To fully embrace the phenomenon of secure coding, one needs to create a secure development environment that is built on a reliable and secure IT infrastructure using secure hardware, software, services, and service providers.

However, building secure software by writing secure code is easier said than done because the developers building the software normally have less idea of vulnerabilities, exploits, and remediation.

Secure software engineering, including secure coding concepts, is also not taught in the college. Moreover, in several organisations, both development and security teams may also be working in silos.

To address this problem of writing secure code, NIC has designed and developed a secure code crowdsourcing platform for exchanging secure code among the NIC developer community.

Crowdsourcing is the practice of obtaining information or input into a task or project by enlisting the services of a large number of people, either paid or unpaid, typically via the internet.

The sole purpose of this platform is to allow for the voluntary contribution of secure code snippets by NIC developers that may help other NIC developers in patching security vulnerabilities with ease that are found during the app audit process. NIC developers may use this platform to gather more information and best practices to be followed during the development of web or mobile apps.

This Secure Code Crowdsourcing platform can be accessed by the NIC developers using their Parichay credentials. (Link to the platform: https://x-seccode.nic.in)

NIC Developers may use this platform for finding remediation code for security vulnerabilities as well as for contributing their audited secure code for security vulnerabilities that can be used by another software developer. In other words, we can say that this platform is for the developer and by the developer.

This platform broadly covers the following features:

Vulnerability Listing

After logging into the system, a developer may view the list of vulnerabilities based on of his / her preferred programming language (Java, .Net, PHP), for which secure code snippets are available. These vulnerabilities are sourced from web app security issues that were found and reported by the NIC Security Audit Team. These vulnerabilities are mainly based on the OWASP Top 10, a list of the top 10 most critical web application security risks published by the Open Web Application Security Project (OWASP).

Vulnerability Description

Here, each security vulnerability is briefly explained. The vulnerability may be related to a programming language, an application framework, or open-source libraries. The patching of these vulnerabilities requires an understanding of the vulnerability, platform, and application flow. If not, it might cause more damage than just protecting the apps.

Solution

Here, the portal displays the actual code snippets for resolving the security issue for a platform. The developer may use this solution and integrate it into the application. They may also add their fixes for resolving the issues, subject to being certified by the NIC Audit Team.

Feedback

If the solution given on the platform does not work or needs some fine-tuning, it can be shared under the comment / feedback option provided with each answer.

Conclusion

The platform can inculcate the culture of writing and sharing secure code among the developer community in NIC. This will certainly empower the new developers to write secure software and cut down the time required to get a security clearance certificate.

Other than writing secure code, there is also a need to enable security at other stages of the SDLC to propagate a secure development cycle across projects.

Contact for more details

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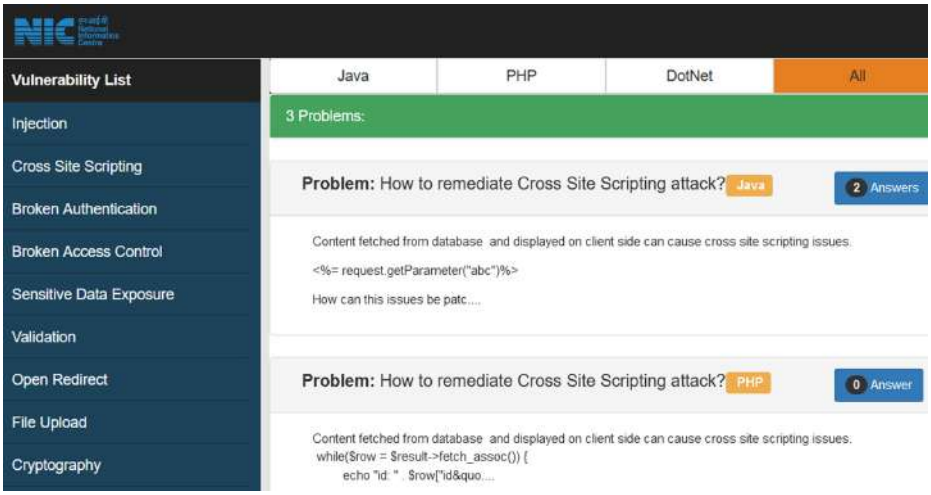
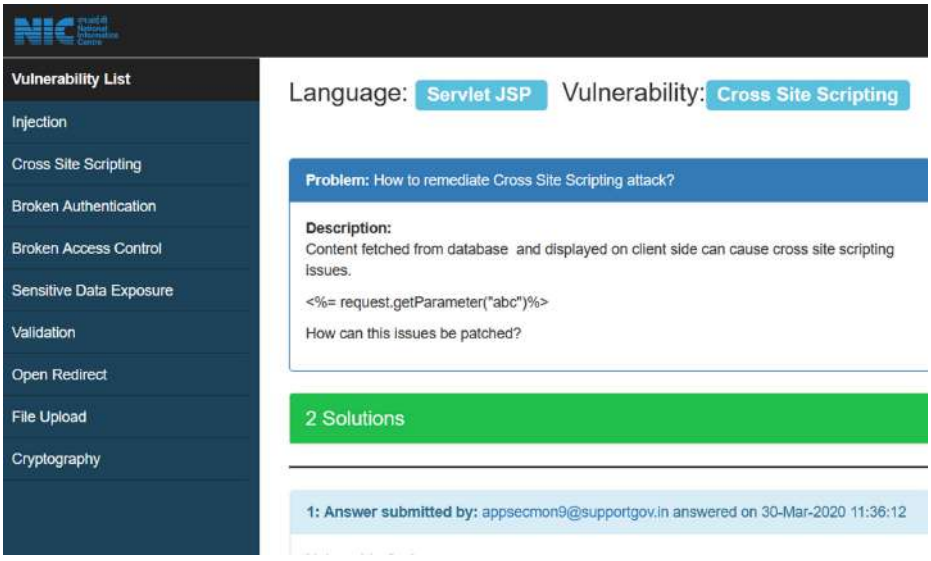
▲ Fig. 13.1: NIC Source Code Crowdsourcing Portal Homepage



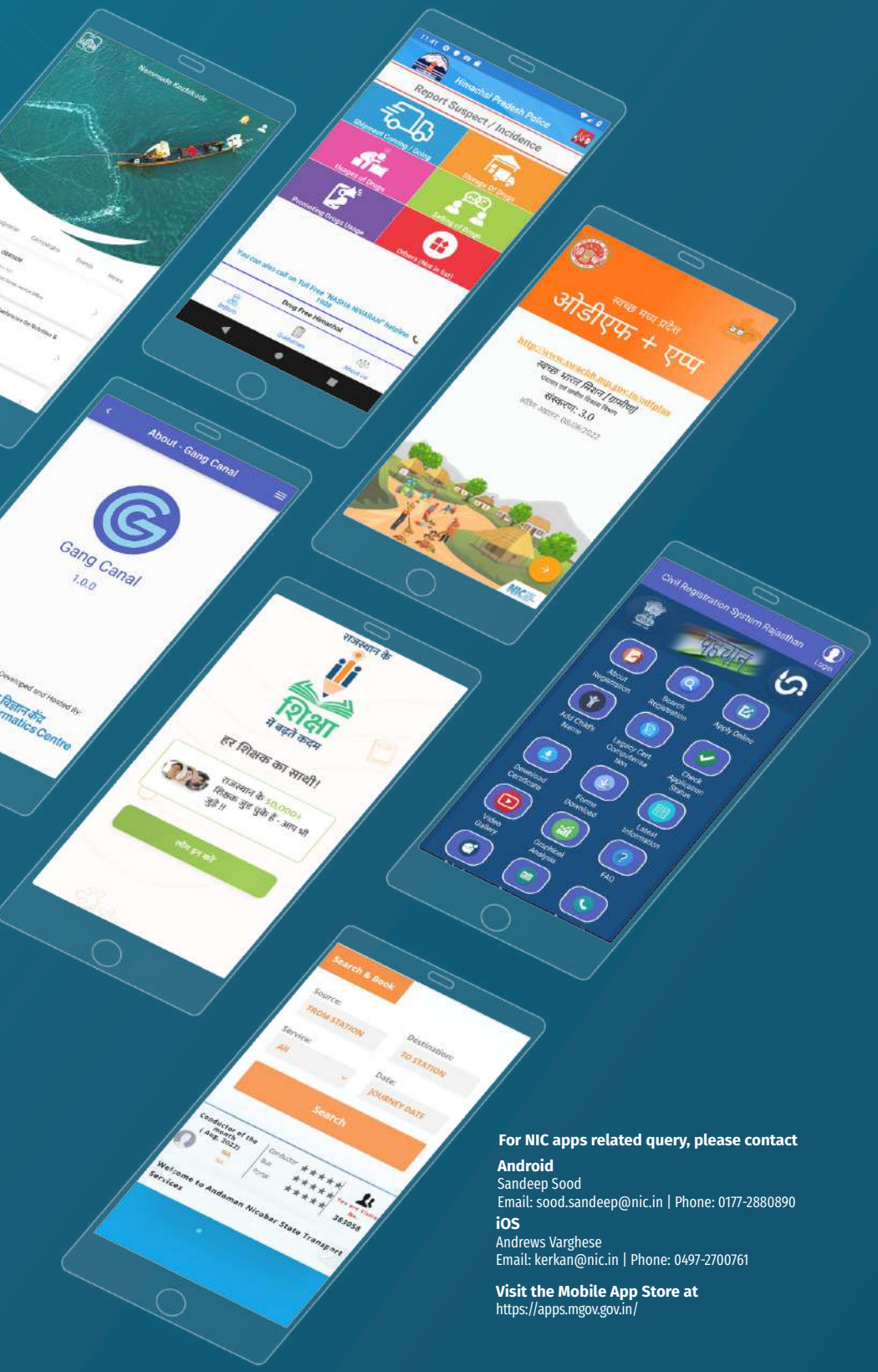
▲ Fig. 13.2: Vulnerability Description Page



▲ Fig. 13.3: Vulnerability Solution Page

Appscape

Showcasing latest mobile apps developed by National Informatics Centre



Mobile technology has emerged as a primary tool for governments to serve their citizens. It has bypassed the need for traditional physical networks for communications and collaborations. It is also much more affordable and accessible, thus strengthening the nation through better citizen-government interaction. To further nourish this interactivity, NIC has created a repository of more than 230 mobile apps available through both the Android and iOS platforms. This issue of Appscape covers some of the more popular mobile apps launched recently. These apps belong to different sectors such as Administration, Development, Finance, Public Distribution, Health and Education.

StarBus

StarBus is a cloud-based Bus Ticket Booking System, developed by NIC for Andaman State Transport Service. This eTicketing platform facilitates commuters to book tickets in advance alongside easy cancellation and refund of bus tickets as per their convenience. The app also allows you to check the seat availability to plan the journey with ease.

A person can purchase his or her tickets one month prior to the scheduled departure date (excluding date of journey). The bus service seat reservation booking system will close two hours prior to the scheduled departure time and date of the proposed trip.

After a successful online transaction, this eTicket will be sent to the email address listed in the passenger's profile during user registration. Passengers can obtain a printout of this eTicket from his or her email or after logging in to his account.

The registration is not mandatory and a person can also book tickets as a Guest User. For a Guest User, a valid mobile number is required. On booking the ticket, an SMS is sent to the registered mobile, which can be produced at the time of boarding with valid photo ID proof for traveling.

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Visit the Mobile App Store at
https://apps.mgov.gov.in/

RKSMBK App

The core concept behind the "Rajasthan Ke Shiksha Mein Badhte Kadam" (RKSMBK) programme is to enable the students to acquire competencies by providing value-based instruction based on their learning levels, as opposed to merely completing the curriculum in the classroom.

RKSMBK App is a learning application designed to supplement and facilitate this scheme. With help of this app, teachers will be able to complete each stage of the RKSMBK program and enable students to complete the course, while working in a gamified manner and sharing their progress using this application.

The app provides teachers with recommendations and insights regarding the progress of each student based on their performance. It also facilitates a simple, sequentialised form of classroom procedures that makes each class "evaluation-ready."

Moreover, the app also recognises and rewards teachers with coins and medals for completing activities and allows the teachers to share their medals of achievement on social media Connect with your co-teachers and help make a positive difference in each student's learning outcomes.

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Swachh MP ODF+

Swachh MP ODF+ is a mobile app developed by NIC Madhya Pradesh State Centre for the effective automation, management and monitoring of the quality of facilities created for the improvement of sanitation coverage in the rural areas of Madhya Pradesh. It works in tandem with Swachh MP Portal 2.0.

The app facilitates verification of toilets constructed under the Swachh Bharat Mission (Gramin). It also helps in identification of left out beneficiaries and report various Information, Education, and Communication (IEC) activities and events by the SwachhaGrahis.

The mobile app facilitates role-based access to all individuals / stakeholders for submission of their activities. The app will also help in assessment of activities performed by SwachchaGrahis for the automated calculation of their incentives.

The app will assist in the planning, progress tracking and effective implementation of SLWM projects and activities in the rural areas of the state.

Moreover, the app will also facilitate knowledge sharing and content management in the form of Trainings, Workshops, Events, Best Practices, Circulars, and Orders.

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Pehchan

Pehchan is a Civil Registration System developed for the citizens of Rajasthan to apply for their Birth / Death certificates alongside other certificates in a time-bound manner. On registration, the system generates a unique reference number for the application. After completion of each state, from applying for the certificate to final delivery of the certificate, the user gets a notification on their registered mobile number.

The app is integrated with UIDAI for Aadhaar authentication and has the facility of digitally signed certificates by the registrar and sub-registrar. On the administrator side, the app also facilitates role-based access to registrars, sub-registrars, block statistical officers, district registrars and chief registrar. The app also enables monitoring up to grass-root levels and timely reporting of events online by citizens.

The Pehchan system also provides a facility for legacy registration, in which an already registered registration can be mapped digitally without changing any details in the original registration. The app is available in two languages and allows users to download their registration in the bilingual format.

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Gang Canal

Gang Canal, named after its patron, Maharaja Ganga Singh of Bikaner, has played an important role in the social, economic, and cultural development of Western Rajasthan. The canal system is dubbed as the lifeline of the region.

Continuing on the rich legacy associated with Gang Canal, a generalised android-based mobile app having same name is designed and developed by National Informatics Centre, to equip and empower farmers of the West Rajasthan region with latest information on canal water flow. As of now, app shows the regulation details of the Gang Canal Water System for the Ganganagar district of Rajasthan. The app is beneficial for farmers who are dependent upon the Canal Water System for the purpose of irrigation and other agriculture-allied activities such as inland fisheries, aquaculture, horticulture, and floriculture.

Farmers can also get details of various canal system aspects such as canal water level, date and time of canal opening, and date and time for canal closing.

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Drug Free Himachal

Drug Free Himachal is an Android-based app that educates users about the harmful effects of Narcotic Drugs. The mobile app lists important information for parents, teachers, and students on the harmful effects of drugs, how to identify a drug user, Indian Narcotics Laws, and drug de-addiction. The app also lists important advice on drug de-addiction and rehabilitation centres in the state.

The most important objective of this app is to assist citizens in informing the Himachal Pradesh Police Department about any information regarding (i) shipment of drugs; (ii) storage of drugs by any individual or group; (iii) usage of drugs; (iv) sale and purchase of drugs; (v) promoting activities related to drug usage; and (vi) any other allied activities. The information of citizens is kept confidential.

The app allows users to send photographs to the police along with other information. This information will help law enforcement authorities apprehend criminals and make Himachal Pradesh a safe and drug-free state.

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Nammude Keralam

Nammude Keralam is an android-based mobile app designed and developed by NIC Kerala in collaboration with the Kozhikode District Administration. It provides a platform for the citizens to 'participate, design and create in the local governance.

The app has a provision for citizens to interact with District Administration for effective service delivery, programme implementation and decision-making participation. It facilitates citizen-centric governance through prompt and effective service delivery; and real time response from the District Administration, thus, enhancing the overall citizen experience.

The app enables citizens to get information on various state-run programs / campaigns / events and concurrently participate in various contests developed by the State agencies.

The app helps to file civic and personal complaints, and facilitates booking a meeting with the concerned official for the same. It also has features like Citizen Participation through Open governance, communicating information about departments and feedback, launching and participation in campaigns and discussion forums for citizens.

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Hon'ble Prime Minister, Shri Narendra Modi, launches the National Portal for Rooftop Solar

During the grand finale event, which marked the conclusion of Ujjwal Bharat Ujjwal Bhavishya – Power @ 2047, Hon'ble Prime Minister Shri Narendra Modi launched the National Portal for Rooftop Solar via video conferencing.

Designed and developed by NIC, this portal enables monitoring of the application process for the installation of rooftop solar plants, beginning with the registration and ending with the final release of subsidies into consumers' bank accounts following installation and inspection of the plant.

Addressing the commemoration, Hon'ble PM said, "we are resolved to create 175 GW of renewable energy capacity by the completion of 75 years of independence. Today we are close to achieving our goal. So far, about 170 GW capacity has been installed from non-fossil sources."

He further added that solar panels are being encouraged in households as this will help in reducing electricity consumption and bills in the country. Each year, this will save 50 thousand crore rupees in terms of electricity bills for lower-middle-class and middle-class households."

Hon'ble PM also said that along with increasing the production of electricity, the emphasis should also be given on saving electricity. Our distribution losses are in double digits, whereas in the developed countries of the world it is in single digit. Solar can help with this.

He also highlighted the benefits of PM Kusum Yojana and said, "We are providing a solar pump facility to farmers, helping to install solar panels on the side of the fields." He reiterated, "Saving electricity means enriching the future."

Hon'ble Prime Minister, Shri Narendra Modi, launching National Portal for Solar Rooftop at the Ujjwal Bharat Ujjwal Bhavishya – Power @ 2047 finale

-Informatics News Desk, NIC-HQ

Hon'ble Chief Minister, Kerala, Shri Pinarayi Vijayan, inaugurates Aadhaar-based Unique Thandaper System

Hon'ble Chief Minister, Kerala, Shri Pinarayi Vijayan virtually inaugurated the Aadhaar-based Thandaper System in the state. Thandaper is a unique 13-digit long unique identifier which maps the ownership of land parcels across the state. It can be generated by seeding the land owner's Aadhaar identifier or a combination of Aadhaar identifiers (in case of joint or institutional ownership of land).

The event was held in the august presence of Shri K. Rajan, Hon'ble Minister of Revenue, Shri Antony Raju, Hon'ble Minister of Transport, Shri V. Sivankutty, Hon'ble Minister of General Education, Dr. A. Jayathilak, Additional Chief Secretary (Revenue) and Shri P. V. Mohan Krishnan, DDG & SIO Kerala. Several senior-level officials from State Revenue Department and NIC Kerala also joined the event through the NIC Video Conferencing service. In the event, Shri Antony Raju received Thandaper for his land holdings across the state by Hon'ble Minister of Revenue, Shri K. Rajan.

The module used for this system has been developed upon the bedrocks of ReLIS (Revenue Land Information System) suite of software, also facilitated by NIC.

Before Unique Thandaper, a land parcel could have multiple Thandaper numbers, had the land been registered multiple times. This led to numerous inconsistencies, such as the prevalence of Benami lands - or lands with proxy ownership. This led to difficulty in tracking property tax payments, that are expected to be addressed by this system.

As ownership information becomes more transparent, tracking and identifying excess land owned by individuals or families will become easier. The excess land can be then redistributed to the landless farmers of the State under Land Reforms Acts.

A person can simply download his Thandaper number through the Thandaper portal or Digilocker.

Hon'ble Chief Minister, Kerala, Shri Pinarayi Vijayan, inaugurating Aadhaar-based Unique Thandaper System through NIC Video Conferencing Service

Hon'ble Minister of Transport, Shri Antony Raju, receiving his Thandaper Number from Hon'ble Minister of Revenue Shri K. Rajan

-Informatics News Desk, NIC-HQ

Hon'ble Chief Minister, Punjab, Shri Bhagwant Mann, launches Online Driving Licence Facility

The Hon'ble Chief Minister of Punjab, Shri Bhagwant Mann, launched the Online Driving Licence system, SARATHI in the state of Punjab. The service will facilitate the citizens of the state to get the learner's driving licence with a single click from their computer, mobile, tablet or laptop in a transparent manner.

The online facility will work in tandem with the existing offline Learning Driving Licence facility available at service centres, but in the case of offline service, applicants need to give an online traffic signs test first.

Hon'ble CM said, "this will save time, money and energy of the people desirous of getting learner's driving licence in the comfort of their homes round the clock." He further added, "this decision would help check corruption. Last year, 5.21 lakh people had got the learning licence made, but now applicants would not have to visit any office."

Hon'ble Chief Minister, Punjab, Shri Bhagwant Mann, launching Online Driving License Facility in Punjab

-Informatics News Desk, NIC-HQ

Hon'ble Chief Minister, Meghalaya, Shri Conrad Sangma, launches MSPSDC Portal

Hon'ble Chief Minister of Meghalaya, Shri Conrad Sangma, has launched Integrated Web Portal of Meghalaya State Public Services Delivery Commission (MSPSDC) at Yojana Bhawan, Shillong in presence of Chief Commissioner, Shri M. S. Rao and State Informatics Officer, Shri T. Dkhar.

Speaking during the launch, Hon'ble CM said, "This a revolutionary step towards achieving citizen-centric governance and is at the core of what Government is trying to achieve through the provision of time-bound delivery of services to citizens by Government Departments. He further added that the Integrated Web Portal is a step towards achieving citizen-centric governance and improving the overall delivery mechanism. He emphasised that all 188 services would be made available at the earliest on the portal and urged the departments at all levels to follow the timelines so that there is no delay.

The portal is designed in a way to provide maximum convenience to citizens. A citizen having poor network connectivity can also avail of the services of the portal through Common Service Centres in the state.

Hon'ble Chief Minister, Meghalaya, Shri Conrad Sangma, launching integrated MSPSDC web portal at Yojana Bhawan, Shillong

-Informatics News Desk, NIC-HQ

Hon'ble Chief Minister, Sikkim, Shri Prem Singh Tamang, launches Online Permit System for Visiting Restricted and Protected Areas

Hon'ble Chief Minister of Sikkim, Shri Prem Singh Tamang, launched the Online Permit System for entering the Restricted and Protected Area of the State during the State Level Independence Day 2022 celebration at Namchi, Sikkim.

Due to Sikkim's proximity with neighbouring countries, all foreign nationals require a Restricted Area Permit (RAP) to visit any part of the state. Moreover, both foreigners and Indian nationals require a separate permit known as the Protected Area Permit (PAP) to visit protected areas of Sikkim. A Protected Area Permit is issued for specific destinations along a specific route and number of days. Both permits are being issued by the Check Post branch of Sikkim Police.

From now, the Online System developed by NIC will digitise the permit application process and enable both travellers and travel agents to apply for passes in digital mode. The issued permits have Quick Response Codes (QR) which can be read either on a mobile phone or on a QR barcode reader.

Hon'ble Chief Minister, Sikkim, Shri Prem Singh Tamang, launching Online Permit System for visiting Restricted and Protected Areas of the State

-Informatics News Desk, NIC-HQ

Hon'ble Chief Minister, Assam, Dr. Himanta Biswa Sarma, launches the State Public Procurement Portal of Assam

Hon'ble Chief Minister Assam, Dr. Himanta Biswa Sarma, launched the State Public Procurement (SPP) Portal of Assam on 22nd Aug 2022. The event was attended by officials from World Bank, Government of Assam, NIC Assam and NIC Chennai (through video conferencing).

SPP Portal is an integrated platform to access all tender-related information of Assam Government Departments, State Public Sector Enterprises and other institutions covered under the ambit of the Assam Public Procurement Act, 2017. It allows bidders and citizens to access any procurement-related information of the State of Assam and serves as a single source of truth for all Assam Government tenders.

All tender-related information is freely accessible to the general public and credible information is made available on the public procurement of goods, works and services by the procuring entities.

SPP Portal aggregates the following information:

- Online Tenders published on https://assamtenders.gov.in (GePNIC Application), through automated web-service APIs
- Online Tenders for Assam published on PMGSY (GePNIC Application), through automated web-service APIs
- Tenders for Assam published on GeM, through automated web-service APIs
- Manual Tenders below the threshold value of 25 Lakhs, will be published on the SPP Portal by the procuring entities

The procuring entities (departmental users) have the facility to upload the Annual Procurement Plan, Manual Tenders and other related documents.

Hon'ble Chief Minister, Assam, Dr. Himanta Biswa Sarma, launching the State Public Procurement Portal of Assam

The portal provides a Dashboard facility for the Departmental Users to display tender data, the primary intention being to provide information at-a-glance. It also provides a "Search" feature to the public to search for various kinds of tenders and sort them according to the criteria such as tender activity, tender value, and tender scope. The tenders can also be filtered according to - organisation, category, GePNIC and GeM Bids.

A grievance module has also been provided on the portal, through which citizens may lodge grievances and receive resolution. Citizens can also provide feedback through a feedback module.

-Kavita Barkakoty, Assam

Chief Secretary, Jammu & Kashmir, Dr. Arun Kumar Mehta, launches eUNNAT Portal

Dr. Arun Kumar Mehta, Chief Secretary of Jammu and Kashmir, launched the Unified, Integrated, Accessible and Transparent (eUNNAT) services portal for the country's youngest union territory.

This makes the UT of Jammu and Kashmir the first among States and UTs to use Meri Pehchan-National Single Sign-On to enable multiple citizen-centric services under a single roof.

Citizens can now access and register themselves on the portal https://eunnat.jk.gov.in for a number of government services. Some of the services currently available on the portal are Character Certificate, Dependency Certificate, Marriage Certificate, Income Certificate, Asset Certificate, Legal Heir Certificate, Category Certificates, Property Certificate, Certificate of Unemployment, and Financial Assistance under Ladli Beti and Marriage Assistance Scheme.

On the occasion, Dr. Mehta highlighted the commitment of the Government of Jammu and Kashmir to promote citizen-centric governance by facilitating online access to various departmental services.

CS J&K also observed, "the government's resolve is to provide easy access to all government services, decrease human interface and remove the compulsion of physically visiting government offices for service delivery towards realising the vision of "Aap Ka Mobile, Humara Daftar."

Referring to public feedback as a pillar of support in participatory governance, he also appealed to the public to enthusiastically share their feedback on a wide range of departmental services through the Rapid

Chief Secretary, Jammu and Kashmir, Dr. Arun Kumar Mehta, launching eUNNAT Portal

Assessment System as this will allow the Government to assess public expectations and identify areas requiring improvements.

-Informatics News Desk, NIC-HQ

Hon'ble Chief Minister, Assam, Dr. Himanta Biswa Sarma, dedicates PSKs for Kritagyata Services

In a state-level function organised by the District Administration of Kamrup on 30th July 2022, Hon'ble Chief Minister of Assam, Dr. Himanta Biswa Sarma, inaugurated 27 Kritagyata Pension Seva Kendras (PSKs) and dedicated them to the citizens of Assam. He appreciated the functionalities of the Kritagyata portal which provides digital facilities for online pension sanction and payment tracking thereby simplifying the operations of the pension process. As of now, over 5000 PPOs have been generated by the system.

These PSKs will act as facilitation centres which will provide all necessary support to the pensioners for submitting online forms, sanctioned by the Head of Offices, uploading of scanned Service Books, generation of Life Certificates from Jeevan Pramaan using biometrics through registered devices for Jeevan Pramaan Services.

Hon'ble Chief Minister, Assam, Dr. Himanta Biswa, launching 27 Pension Seva Kendras across the state

-Kavita Barkakoty, Assam

Hon'ble Chief Minister, Haryana, Shri Manohar Lal, launches National e-Vidhan Application (NeVA) in Haryana Vidhan Sabha

Hon'ble Chief Minister of Haryana, Shri Manohar Lal, launched National e-Vidhan Application (NeVA) at the start of the monsoon session of the Haryana Legislative Assembly on 8th August 2022.

With the launch of the NeVA application, Hon'ble Members of Haryana Legislative Assembly will be able to use digital tablets instead of reading the session's proceedings and conducting regular business on paper.

During the event, Hon'ble CM praised the efforts put in by NIC Haryana Team. He also appreciated Shri Deepak Bansal, DDG & SIO for the successful implementation of the application in the state assembly.

Hon'ble Chief Minister, Haryana, Shri Manohar Lal, launching NeVA application for Haryana State Assembly

-Informatics News Desk, NIC-HQ

Government of Madhya Pradesh and NIC signs MoU for implementation of eGranthalaya

In order to revolutionise the Education sector in the State of Madhya Pradesh, the Government of Madhya Pradesh has signed a Memorandum of Understanding (MoU) with NIC to implement eGranthalaya, the Library Information Management System, developed by NIC across 528 government colleges and 16 government universities across the state. The MoU was signed in the presence of Hon'ble Minister of Education, Dr. Mohan Yadav, between officials from the Education Departments of Madhya Pradesh and NIC Madhya Pradesh.

Addressing the commemoration, the Hon'ble Minister Dr. Mohan Yadav said that this will benefit 16 lakh students of the State studying in Higher Education institutes. With this software, students will be able to avail rare and expensive books in the digital format. This will result in an improvement in academic quality.

At present, over 28000 educational institutions in the country are connected to eGranthalaya Software. The service is also available on mobile phones. Students can take advantage of this facility simply by registering themselves on the app. NIC officials ensured that necessary training would also be provided to professors and support staff posted in the college and university libraries across the state regarding the proper use of the app.

Officials from Government of Madhya Pradesh and NIC Madhya Pradesh signs MoU for the implementation of eGranthalaya in Madhya Pradesh

-Informatics News Desk, NIC-HQ

Singapore unveils Privacy Enhancing Technology Sandbox

To commemorate the ten-year anniversary of the country's data protection laws, Singapore has developed a privacy-enhancing technology (PET) sandbox with the intention of assisting organisations for the launch of their own PET projects. The sandbox will provide a secure environment for organisations to test their PET projects and assist them in identifying the appropriate data sharing tools.

PETs have a potential of unlocking value from private or proprietary data that organisations may not be willing to disclose. As PETs mature, organisations have asked for guidance for deploying PET solutions among their apps. For this, the sandbox will provide a safe environment and testing ground to pilot projects. These projects will assist organisation in identifying the optimal PET for achieving their data sharing goals and gaining a deeper understanding of technical constraints.

Drawing on the lessons from the pilot, Singapore plans to identify common tools that can support industry's adoption of PETs and develop policy guidance to set standards and best practices.

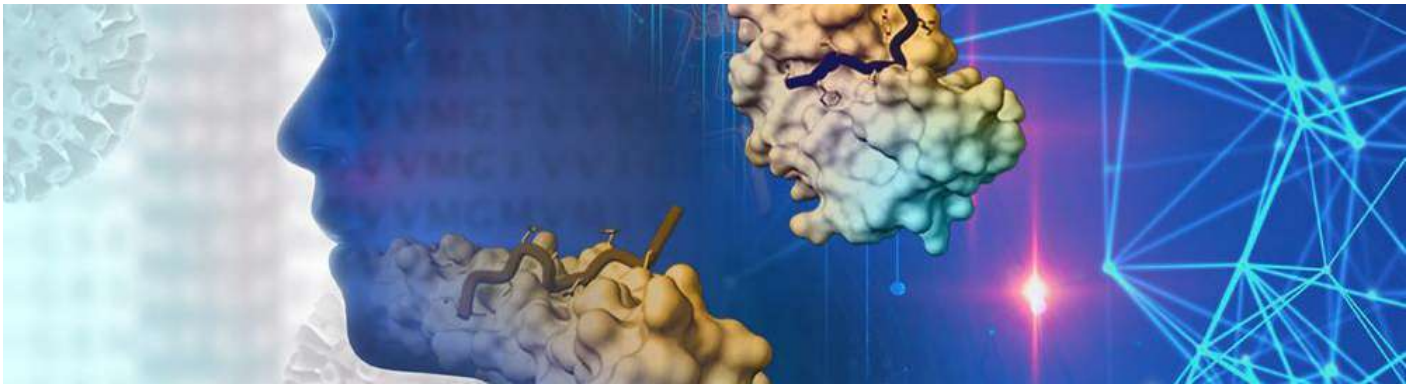
The use cases will be based on common data sharing objectives. This will help the organisations to identify relevant use cases, as well as enable Singaporean authorities to concentrate resources to develop future policy and solutions.

Mr. Yeong Zee Kin, Project Manager, PET said, "While nascent, PET occupy a sweet spot by allowing the extraction and sharing of insights, while

ensuring security and confidentiality of personal data. Through this, we aim to discover the right PET for a use case fit and their limits, so that we can establish standards and best practices to support greater adoption.".

Source- https://www.imda.gov.sg/

US Scientists develop AI to identify Parkinson's from Breathing Patterns



In a collaborative effort between the Massachusetts Institute of Technology (MIT) and other U.S. universities, scientists have demonstrated an AI system that can detect Parkinson's disease based purely on a person's breathing patterns.

Parkinson's disease is notoriously difficult to diagnose due to its dependence on the appearance of motor symptoms such as tremors, stiffness, and sluggishness, but these symptoms typically appear several years after the commencement of the disease.

The tool may assess whether a person has Parkinson's disease based on their nocturnal breathing patterns, which are the patterns of breathing that occur during sleep.

Over the years, cerebrospinal fluid and neuroimaging have been studied as potential screening tools for Parkinson's disease. However, these techniques are invasive, expensive, and require access to specialised medical facilities, preventing them from being used in routine testing that would otherwise enable early diagnosis or ongoing disease monitoring.

Researchers have demonstrated that an AI-based Parkinson's assessment may be performed each night at home while the patient sleeps and without physical contact.

For this purpose, scientists created a device resembling a home Wi-Fi router, but instead of giving internet access, it emits radio signals, analyses how they are reflected off the surrounding space, and then, without physical touch, extracts the subject's breathing patterns.

There is no effort necessary from the patient or caregiver, as the breathing signal is then passively transmitted to the neural network for Parkinson's assessment.

The finding has major significance for the development of Parkinson's drugs and clinical care, and it can be broadened in the near future to detect other health problems.

Source- https://www.csail.mit.edu/

US develops a New Privacy Framework for IoT Devices that gives Users Control over Data Sharing

United States has introduced a newly designed privacy-sensitive architecture, Peekaboo, that enables developers to create smart home applications in a manner that addresses data sharing issues and places consumers in charge of their personal data. Before transferring outgoing data to external cloud services, it pre-processes and reduces it in an organised and enforceable manner.

Peekaboo architecture adheres to the data minimisation concept, which refers to the practice of collecting only the minimum amount of data necessary to achieve a certain goal. To do this, the system requires developers to define the required data gathering behaviours in a manifest file, which is then fed into an in-home trusted hub for need-to-know transmission of sensitive data from smart home apps. Not only does the hub operate as an intermediary between raw data from IoT devices and the appropriate cloud services, but it also enables third-party auditors to verify an app developer's data collecting claims The manifest file is comparable to Android's "AndroidManifest.xml" file, which describes the permissions an app need to access restricted system components or other apps.

The architecture makes it possible to define the data collection practices in a more nuanced manner, including the type of data to be collected, when it should be collected, and how frequently. In contrast to Android, where apps are either granted or denied access to a specific feature, the architecture makes it possible to specify the type of data to

be collected, when it should be collected, and how frequently.

This mechanism provides a greater flexibility than permissions and an enforcement mechanism and allows users (and auditors) greater transparency over the data that will flow out of a device.

Source- https://www.thehackernews.com/

European Union proposes Artificial Intelligence (AI) Act

The European Commission has proposed the Artificial Intelligence Act (AI Act), after two years of public consultations. The Act lays 'down a uniform legal framework across EU for the development, marketing and use of AI in conformity with EU values.' These 'values' are indicated by 'democracy', 'freedom', and 'equality'.

The Act uses a 'risk-based' regulatory approach to all AI systems providers in the EU 'irrespective of whether they are established within the Union or in a third country.' It prohibits certain kinds of AI, places higher regulatory scrutiny on 'High Risk AI', and limits the use of certain kinds of surveillance technologies, among other objectives. To implement the regulations, the Act establishes the formation of a Union-level 'European Artificial Intelligence Board'. The Individual Member States are to direct 'one or more national competent authorities' to implement the Act.

The Act was introduced amid growing recognition of the usefulness of AI. For example, investing in AI and promoting its use can provide businesses with 'competitive advantages' that support 'socially and environmentally beneficial outcomes'. However, it also appears cognizant of the many risks associated with AI, which can harm protected fundamental rights as well as the public interest. The Act states that it is an attempt to strike a "proportionate" balance between supporting AI innovation and economic and technological growth, and protecting the rights and interests of EU citizens. Ultimately, the legislation aims to establish a 'legal framework for trustworthy AI' in Europe that helps instil consumer confidence in the technology.

According to commentators at MIT Technology Review, the Act, if passed, could once again shape the contours of global technology regulation in line with the European Union's General Data Protection Regulation (GDPR), which is already an inspiration for data protection laws in multiple countries. The AI Act explicitly seeks to replicate harmonious regulatory approaches that may be useful to other countries as they negotiate their IT legislation.

Source- https://www.medianama.com/

NIC Rajasthan wins Rajasthan State eGovernance Award 2022

At the Rajasthan DigiFest 2022, Jaipur, NIC Rajasthan State Centre won the Rajasthan State eGovernance Award for the implementation of the Integrated Financial Management System (IFMS) in the state. The prestigious award was conferred by the Hon'ble Chief Minister of Rajasthan, Shri Ashok Gehlot, on the State Centre, which was represented by the NIC's Shaladarpan Team, at the event. The State Centre also received congratulatory messages from the Chief Secretary, Rajasthan, Smt. Usha Sharma, and the Principal Secretary (IT), Rajasthan, Shri Akhil Arora, on winning the award.

IFMS Rajasthan is a web-based solution developed for the Government of Rajasthan to increase efficiency in financial planning and expenditure control. Since its launch, it has saved a significant amount of funds and brought various stakeholders such as the Department of Finance, Treasuries, Administrative Departments, Accountant General (AG), RBI, and banks onto a single platform with role-based smart dashboards. These dashboards have provided a better decision support system to all the stakeholders.

NIC Chhattisgarh receives IMC Digital Technology Award 2021

NIC Chhattisgarh has received an Award of Excellence at IMC Digital Technology Award 2021 in the Government and Public Sector Units Having Digital Strategy category for ePrashna and eUttar apps.

ePrashna facilitates the Hon'ble Member of the Chhattisgarh Legislative Assembly to ask the questions during the question hour of the assembly sittings online, which are then discussed and sent to the respective departments by the assembly question branch, whereas the eUttar app helps in fetching the answers from the concerned departments. With the help of these apps, paper waste can be reduced. Furthermore, they enhance overall efficiency by making sure that all tasks need to be performed in a time-bound manner.

NIC Chhattisgarh State Centre team received a congratulatory message from the Hon'ble Speaker of the Chhattisgarh Legislative Assembly, Dr. Charan Das Mahant, for winning the prestigious award.

NIC wins at the Open Group India Awards 2022

NIC conferred 'Award of Distinction in Digital Innovation' under the TOGAF® Standard / Enterprise Architecture Category by The Open Group, for creating a successful and well thought out solution National Generic Document Registration System (NGDRS) covering the entire lifecycle—from inception to outcomes, at the Open Group India Awards 2022.

NGDRS is an end-to-end workflow enabled document registration system which allows citizens across 15 States and UTs of India to access the state website and submit their documents for registration at the respective sub-registrar office online. As of now, over 35.5 million registrations have been done using NGDRS application. The prestigious award was received by Shri I.P.S. Sethi, DDG, on behalf of NIC.

NIC West Bengal shines at Technology Sabha Awards 2022

NIC West Bengal State Centre has bagged seven prestigious Technology Sabha Awards across multiple categories at the Technology Sabha Conference 2022, Kolkata. Out of seven, three awards have been given to the eAbgari application. It is not out of place to mention that the eAbgari app by NIC West Bengal has been replicated in eight other States and UTs viz., Punjab, Odisha, Tripura, Arunachal Pradesh, Uttarakhand, Jammu & Kashmir, and Sikkim. Some other states, such as Tamilnadu, Ladakh, Delhi, and Rajasthan, are planning to do so in the near future.

Major apps which have won the prestigious awards are: 1. Duare Tran (Relief at the Doorstep) under the Analytics / Big Data category, 2. Duare Sarkar (Government at the Doorstep) under the Artificial Intelligence category; 3. Monitoring System of State Excise Establishments for Parliamentary and Assembly Elections under the Enterprise Application category, 4. Samannay Portal of the Chief Minister's Office under the Enterprise Mobility category; and eAbgari under Blockchain, Enterprise Solution, and Supply Chain Management Categories.

NIC wins Ayushman Utkrishtata Puraskaar 2022

NIC received the 'Ayushman Utkrishtata Puraskaar 2022' for being the top government integrator with the highest number of health records linked to the Ayushman Bharat Health Account (ABHA), at Arogya Manthan 2022 organised by National Health Authority (NHA), in New Delhi.

Ayushman Utkrishtata Puraskaar is given in recognition of excellent services provided by the organisation for taking the Ayushman Bharat Digital Mission a step forward.

The award was received by NIC Health Projects Division, which is spearheaded by Shri Sunil Kumar, Dy. Director General, and Dr. Piyush Gupta, Sr. Technical Director.

The NIC Health Projects team includes Smt. Suparna Bhatnagar, Technical Director, Shri Pawan Kumar Yadav, Technical Director, Shri Atul Verma, Scientist-C, Smt. Megha Gupta, Scientist-B, Sushri Vidhi Sethi, Scientist-B, and Shri Tapas Kumar, Scientist-B.

NIC-MCA wins SKOCH GOLD Award 2022

NIC Ministry of Corporate Affairs (MCA) Division has won the prestigious SKOCH GOLD AWARD 2022 under the Governance category for exemplary efforts in developing a robust, user-friendly, cyber-secure application NFRA-Audit Quality Review for the National Financial Reporting Authority.

The prestigious award was conferred to Shri Jaskaran Singh Modi (HoD & Sr. Technical Director, NIC-MCA) by Shri Sameer Kochhar, Chairman, SKOCH Group, at the award ceremony held on August 17, 2022 over the Zoom webinar hosted by the SKOCH Group.

The Skoch Awards are based on the philosophy of spearheading positive socio-economic change through recognising people who have contributed immensely to salutary transformations in society and governance by displaying exemplary leadership abilities.

NIC-MCA Division core team includes Shri Suhag Chand (Dy. Director General and HoG), Shri Jaskaran Singh Modi (HoD and Sr. Technical Director), Shri Brijesh Krishna Sharma (Technical Director), and Smt. Anju Sagar (Technical Director).

NIC Visakhapatnam receives Merit Certificate

On the eve of the 75th Independence Day Celebrations, NIC Visakhapatnam District Centre received a Merit Certificate from District In-charge Minister Smt. V. Rajini in the presence of District Collector Dr. A. Mallikarjun, IAS, for the support given by the District Centre in the development of various web applications for and technical support to various Government Departments and Offices in the district. The Certificate was received by Shri Shaik Hameed Pasha, Additional District Informatics Officer, Visakhapatnam, on behalf of the NIC Visakhapatnam team.